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ERUPTION OF THE GREAT GEYSER.

TO

CHARLES R. SMITH, Esq.,

BY WHOSE FRIENDLY AID, WHEN ALL OTHER MEANS HAD FAILED, THE

VISIT TO ICELAND

WAS ACCOMPLISHED,

THIS LITTLE VOLUME

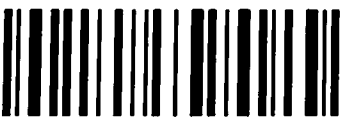
IS INSCRIBED,

WITH THE MOST SINCERE REGARD,

BY

HIS OBLIGED AND GRATEFUL FRIEND,

THE AUTHOR.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INTRODUCTION.

When at Tronyem last year, I felt a strong desire of visiting Iceland, not however at that time, but on some future occasion. I wished for an opportunity of comparing the character and condition of the natives of that island with their kindred and ancient stock—the Norwegians; and I wished also to contemplate the extraordinary physical phenomena resulting from subterranean fire which have been, and still are, in operation, on the surface of this large island, from a period of time to which neither the memory nor the records of man extend. But I found that the chances of a conveyance from hence were indeed very small, as little or no communication was held direct between the two countries, since the separation of Norway from the Crown of Denmark. Unwilling, however, to abandon the design, I inquired in the spring of the following year whether any trade was carried on with Iceland from London, Liverpool, or the northern ports; but was informed that, though a casual ship might proceed thither from Liverpool or Hull with salt and a few articles of colonial produce, yet that nothing like a regular trade existed with that island—indeed, as I since found, not an English vessel in the

course of last summer had proceeded thither, and only *one* Danish vessel took in a cargo of salt from Liverpool, which vessel was wrecked on the coast of Iceland. Disappointed in the hope of procuring a conveyance from England, I requested my father to write to Sir Henry Watkins Williams Wynn, our Envoy Extraordinary and Minister at the Court of Copenhagen, for information as to the probability of a certain conveyance from thence.

The answer of His Excellency was exceedingly kind; he regretted that I was not myself the bearer of the letter, as he might then have procured me a passage in a Danish ship of the line, about to proceed to Iceland with Prince Frederick and his suite, though he could not have ensured me a conveyance back, as a corvette only would be sent in the autumn to bring back the Prince to his destination, and that he apprehended it would be too small to afford accommodation. He was kind enough also to refer me to a quarter most likely to give information, and sent me two letters of introduction to residents on the island.

In the mean time, however, Mr. Smith, whose acquaintance I was so fortunate to make in Norway the preceding year, had the kindness, without being aware of my intention to visit Iceland, to offer me a passage in a beautiful yacht called the "Flower of Yarrow," belonging to the Royal Yacht Club, of which he is a member. He had purchased her from the Duke of Buccleuch, and proposed to make his first voyage to

Tronyem, there to receive on board Mr. Broder Knudtzon, one of the most respectable gentlemen in that place, and a member of the Storthing; from thence to sail to Iceland, and, after visiting that island, to convey him to England, and ultimately to the Mediterranean. I was of course delighted with such an eligible and unlooked-for piece of good fortune, made my preparations accordingly without loss of time, and arranged with Mr. Smith to join the yacht at Liverpool.

I did not flatter myself that I should be able to collect much additional information respecting this most extraordinary island, which had been visited by some, though not many, of the most intelligent among our countrymen; but it would at least be something to have the opportunity of comparing the accounts of preceding travellers, which have been but "short and far between," with the present state of its inhabitants, and more particularly the descriptions of those singular boiling fountains known by the name of the *Geysers*. To witness the ebullitions and the eruptions of these would be ample compensation for any inconvenience I might suffer, and I apprehended none in a well-built and well-found yacht.

Of the numerous works that have been published on Iceland, of which the catalogue contained in the English translation of Dr. Von Troil's letters amount to one hundred and twenty, few are known to the English reader; the greater number being in the Danish, Swedish, German, or Icelandic languages—some few in Latin.

To our immortal Bard, however, who appears to have

known everything, though we know little or nothing of what concerns him personally, Iceland was not wholly a *terra incognita*. "Pish!" exclaims *Nym* (in Henry V.), on whom *Pistol* retorts—"Pish for thee, Iceland dog! thou prick-eared cur of Iceland!" Shakspeare never missed the proper epithet:—the common dog of Iceland has short erect ears.

The first account I have seen of this country by an eye-witness, and it is the result only of a short and incidental visit, is by a French doctor, who went on an expedition partly of trade and partly of discovery, set forth by a "Company of traders to the north" in the year 1670, sanctioned by the King of Denmark. The name of the writer is not stated, nor the name of the English translator, but it is addressed to Sir Charles Thorold, Knt., Alderman, and Sheriff of London. It purports to be a full account of Norway, Lapland, Borandia, Siberia, Samojedda, Zembla, and Iceland. In returning from this voyage, the ship was caught in a storm near Greenland, and not knowing where they were, but seeing a great fire, the master said it must be Mount Hecla. They got into a harbour near Cape Heri, and proceeded to a village called Kirkebaæ*, where they were cordially entertained by some Danish merchants, who told them that the day before the whole island shook so violently, that they thought they should all be swallowed up. The writer and a party went to see Mount Hecla, which

* This place is on a fiord opposite to the Westmann's Islands.

they reached in two days, having travelled the last five miles strewed over with ashes and pumice-stones. Most of the company stayed below, but the author and a Danish merchant, with the guides, "footed it over ashes and pumice-stones, sometimes up to the calves of our legs in ashes; we ascended half a league, and then felt the ground shake under us; we also heard such a terrible noise in the bowels of the earth, that it seemed as if it would burst open: at the same time, there appeared on all sides chinks, out of which issued bluish flames, which stunk like stench of burning brimstone. This sight made us turn back for fear of being consumed by them. We had scarce got down thirty yards before a black smoky cloud ascended out of the mountain, and so thick that it darkened the light of the sun, and covered us so that we could not see one another: our fears grew upon us every step we took, for behind us rose blasts of fire, showers of ashes, and pumice-stones, which fell upon us as thick as hail; and this dreadful storm was attended with horrible noises which made us cry out in a frightful manner, fancying that the infernal furies were coming out of the mountain to devour us.

"Fear made us so nimble, that in a quarter of an hour we descended so much of the mountain as we were a full hour in ascending. When our companions perceived we came down so fast upon them, they fell out a laughing at us, and their laughter grew louder when they saw us in such a pickle, as black as if we had been

plunged in soot. But their mirth abated as soon as we came nearer them and dropped down dead, for so they thought us, we being neither able to stir nor speak. They rubbed our temples, nostrils and hands with vinegar, and did what they could to bring us to life again."

He then gives some account of the natives—that is, of the fishermen—some of whom, he says, live in caverns in the rocks, others in huts, some built with fish-bones, some with wood covered with turf. They and their beasts lie under the same roof; they are all ugly, both men and women; they lie upon hay or straw in their clothes with skins upon them, and make but one bed for the whole family. All their work is fishing; they are nasty, rude, and brutal: they are almost all of them wizards and witches; they worship the devil by the name of *Kobald;* they worship an idol cut out of a piece of wood with a knife, very hideous to look on, which they adore privately, and hide for fear of the Lutheran priests.

The condition of the poor Iceland fishermen is, I believe, as miserable, taking into consideration the horrible climate, as that of any human beings on the face of the earth, but they certainly are not quite such savages as the Frenchman has represented them. The "Voyage to the North," however, is substantially true in that part which relates to Norway, and his account of the Copper Mines at Roräas differs in little or nothing from what I found them on my recent visit.

This work of the French doctor is a curious little volume which I met with by accident.

The next writer that the English reader knows anything about is one Anderson, a burgomaster of Hamburg, who, however, was at no time on the spot, but gives such stories as he could pick up from masters of ships, and supercargoes trading to Iceland. Horrebow, who succeeded him, truly says that the old burgomaster's book is filled with romantic tales, and false and severe accusations. This author was a Dane, and remained on the island two years. One of his objects seems to have been that of correcting the blunders of Anderson; but he calls his book the Natural History of Iceland. Both are full of monsters and marvellous stories, and the information of both is vague, unsatisfactory, and little to be depended on. Olafsen and Povelsen were next despatched, in 1757, by order of the King of Denmark, to survey the whole island. Olafsen was a native, and Povelsen the first physician of the island. They published a most elaborate report of what they saw, —and they saw a great deal,—but for want of arrangement, or rather too much arrangement, and by a tiresome repetition of the same things four several times, in describing the four provinces, their account wants that *lucidus ordo* by which much information may be conveyed in a short compass. These repetitions, and the minute enumeration of the long hard names of places that have no interest, are enough to tire the patience of the most persevering reader. Still there is much valuable

information to be culled out of the book; but their easy credulity allowed them to report stories such as it is quite impossible not to reject as fabulous. Thus, for instance, the French doctor had noticed two fountains, one a cold one, which immediately turned his cane into iron, weighing as heavy as that metal; the other, a boiling one, in which he saw a parcel of great animals as big as divers, frisking about and playing together; but on approaching the place, nothing was to be seen of them; the moment, however, that he left the spot, they were again seen playing and frisking as before. "They do so," he says, "when they see nobody; but if anybody approaches, they plunge down to the bottom of the boiling fountain, which, as our guides informed us, is sixty fathoms deep." Horrebow gives an account of the same birds, but more in detail, and very properly disbelieves it; but Olafsen and Povelsen resume the miraculous story, affirming they had it from so many persons worthy of belief, and stating the story to be so extensively credited, that it was difficult not to yield assent—and yet they say, to believe these birds to be in nature, what a number of contradictions does it involve! They further observe, with great *naïveté*, that "their feathers, their beak, and their legs, protected by a callous skin, might endure the boiling water when swimming; but in diving, what would become of their eyes?" but immediately a thought comes across them, and they ask, "has not a *Salamander* eyes? *We know*, however," it is added, "that this creature does not dwell in fire—it

only runs rapidly round it, and traverses but a short space on that element;" and they conclude, most complacently, that—"after all, if these birds exist, they must be amphibious." I mention this as a specimen of their credulity.

Of our own countrymen, Sir Joseph Banks stands first and foremost. Accompanied by Dr. Von Troil, afterwards Archbishop of Upsal, and Dr. Solander, an eminent Swedish naturalist, he embarked in a small vessel which he engaged at so much per month, to examine into the natural history of an island which to his countrymen might be considered as a *terra incognita*. Sir Joseph published nothing himself, but the translation of the clear and sensible letters of Von Troil made the English readers generally first acquainted with Iceland. He had previously, when very young, and just after leaving Oxford, made a voyage to Newfoundland and Labrador, in pursuit of his favourite study of natural history, and then, as everybody knows, embarked with Lieutenant Cook on a voyage round the world. It is said his friends had strongly urged him to give up the idea, and make the grand tour of Europe, but his answer was—"Every blockhead does that: my grand tour shall be one round the whole globe." It was on his return from this voyage that he visited Iceland, taking the Hebrides and the Ferroe Islands in his way.

After this, in the year 1789, Mr. Stanley (now Sir John Stanley), struck with the description given by Von Troil of the wonders of the ignivomous mountains, and

the vehement eruptions of the boiling springs, determined on paying a visit to this extraordinary island, in which he was accompanied by Messrs. Wright, Baine, and some others. On his return he addressed two letters to Dr. Black, which were published in the "Transactions of the Royal Society of Edinburgh," containing an account of the Geysers and the Reykum Springs, which, for clearness and accuracy of description, and elegance of language, has not been surpassed, if equalled, either before or since, and only leaves us to regret that he had confined the publication of his observations to a single object—interesting as it is—the boiling springs of Iceland; and that he had not thought fit to favour the world with a full account of his travels, and remarks on other points regarding this highly-interesting island. I ought, however, to be the last to complain on this score, as, by his not having done so, it has been my good fortune to profit; for, with the greatest kindness and liberality, Sir John Stanley has not only favoured me with extracts from the MS. Journals of his intelligent companions, and his own drawings on a most interesting part of Iceland—the basaltic coast of Stappen-hafn and the Snæfell Yokul, from whence we were driven by stress of weather, and could not obtain a landing,—but has permitted me to make what use of them I pleased, of which kind permission I have fully availed myself, as the reader will see, as far as regards that part of the island. My disappointment was certainly great in being obliged to abandon this spot,

at the moment we were on the point of stepping a-shore; but the reader will suffer no disappointment, Sir John Stanley having enabled me to supply an *hiatus*, far better filled up than a successful landing would probably have enabled me to do.

At the recommendation of Sir Joseph Banks, Mr. Hooker, a young gentleman then distinguished as a botanist, and now known as ranking among the first of botanists and natural historians in general, embarked in 1809 on board a merchant ship, the "Margaret and Anne," at Gravesend, after three days' notice. During his stay in Iceland he had made considerable collections in natural history, particularly in botany, which, with his papers, were unfortunately destroyed by the ship taking fire in which he was returning to England. Yet notwithstanding this irreparable loss of his collections and of his notes, Mr. Hooker, from his recollections, has given to the public a volume replete with valuable information, containing a more complete account of Icelandic plants than is to be met with in any other English author, except in the work of Sir George Mackenzie, into which the "Flora" of Mr. Hooker is copied, while a few new plants are transferred from Sir George's into Mr. Hooker's list.

In the following year Sir George Stewart Mackenzie, impressed with the importance which the study of mineralogy had of late years acquired, and with the intimate connexion it held with geological science, considered the examination of Iceland to be particularly desirable, and

determined to gratify his wishes during the summer of 1810 by a visit to that island. Two gentlemen of the University of Edinburgh, Mr. Henry Holland (now Dr. Holland) and Mr. Richard Bright (now Dr. Bright), volunteered their services to accompany him, which were cordially accepted; and to Dr. Holland his subsequent publication is greatly indebted for the most valuable papers contained therein. To this able and intelligent writer he owes the preliminary dissertation on the history and literature of Iceland, the account of the present state of literature, and the chapter on government, laws and religion, and also the account of the diseases of the Icelanders. To Mr. Bright he is indebted for an account of the zoology and botany of Iceland. To the kindness of Dr. Holland since my return I owe many thanks. I have only to regret that his MS. Journals, with the perusal of which he favoured me, with permission to make what use of them I pleased, came a little too late, or I should have availed myself much more extensively of the valuable information they contain, which Sir George Mackenzie's volume has by no means exhausted.

In the years 1814 and 1815, Mr. Ebenezer Henderson took up his residence in Iceland, with the view exclusively, as he tells us, of investigating the wants of the inhabitants with respect to the Holy Scriptures, and to take measures for the speedy distribution of the copies which had been provided for them by the bounty of the British and Foreign Bible Society. To accomplish this

effectually, he found it expedient to make the whole tour of the island. This necessarily brought him into contact with all classes of inhabitants, and he has published the result of his observations in two octavo volumes, abounding with much curious and interesting matter; but as his descriptions of men and things are avowedly only of secondary consideration with him, he is not so sure a guide as he might otherwise have been. He is also, like some of his predecessors, disposed to be somewhat credulous, as may be inferred from his giving credit to Olafsen and Povelsen's long story of the instinctive sagacity of the little wood-mouse (*mus sylvaticus*), transporting seeds or berries across broad rivers, on thin and flat pieces of dried cow-dung, which parties of four to ten are said to drag to the waterside, and then arrange themselves on their little raft so that they face the centre and each other, while their tails hang over the sides to row the raft, and serve at the same time to steer it: arrived on the opposite bank, they drag their raft and its cargo to the little magazine prepared to receive their winter's store. The Danish travellers do not pretend to have seen this operation themselves, but state that they had the account from those who had seen it, and who were worthy of belief; and that they see nothing in it to induce them to doubt it. Mr. Pennant was a great naturalist, and in that department was much given to the marvellous; he repeats this story, and is credulous enough to believe it, which is perhaps to be expected from one who "assents to the fact,

that the rats, called *Lemming*, are poured down from the clouds in great showers on the Alps of Norway." Dr. Hooker expresses his regret that "such a ridiculous story (as that of the mice) should have been believed by a British zoologist," and he says the thing is laughed at by the more sensible Icelanders. Henderson, however, not only repeats the story, but maintains that "every considerate naturalist will rather be disposed, with our celebrated zoologist (Pennant), to reason analogically, from the well-known sagacity of the beaver and squirrel, than deny the case." He is even happy, he says, to have established the truth of it, as an important fact in natural history, by the testimony of two eye-witnesses—a priest and an old woman. He says he has also established another fact—that they "make use of dried mushrooms as sacks, in which they convey their provisions to the river, and thence to their homes." One would suppose that such sagacious animals, endued with so much wisdom, would build their winter magazines on the same side of the river where their provisions were to be had, and spare themselves the trouble and the danger of a shipwreck, which we are also told sometimes happens. Henderson's book, however, ought to be in the hands of every one who meditates a circuit of the island.

I am not aware of any account having been given of Iceland since the publication of Henderson's work, now just twenty years ago. Sir Thomas Wilson made a voyage thither in his yacht in the year 1831, and Lord

Stuart de Rothsay in 1833, but neither the noble Lord nor the Baronet have favoured the world with what information they may have collected.

As, therefore, twenty years have expired since a fresh word has been uttered respecting Iceland, and as in the course of that period many changes might have taken place both in the moral and physical world, more especially in the latter, it is hoped the little mite I have to offer may, at least, be interesting enough to induce others to follow up the researches that have been made: that it will be received in the same kind and encouraging manner which a former small volume on the northern countries of Europe experienced, is what I dare scarcely persuade myself to expect. Had more time been allowed me, on the present occasion, I should certainly have collected many more materials; but to see Iceland well, and as it deserves to be seen—to witness the domestic habits and occupations of the natives, their mode of living, and every part of their household economy—is not the work of a month nor of a summer, but would require a whole winter to be passed among them in their secluded abodes, which, after all, might prove a less sacrifice of personal comfort than the appearance of their turf and stone hovels would seem to forebode: most happy should I be to make the experiment would circumstances allow me to do so. I know of nothing, in the way of travel, so interesting as would be a tour round Iceland, and through the heart of the island, in

company with a well-informed geologist, to whom, of every other class of naturalists, Iceland must prove the most inviting. For my own part, I never felt so strongly my lack of knowledge in that interesting department of science, until I set foot on the shore of Iceland.

VISIT TO ICELAND,

&c.

CHAPTER I.

FROM LONDON TO TRONYEM.*

Birmingham—Liverpool—"Flower of Yarrow" and her Establishment—*Anticipations of the Party*—Departure—Rachlin Island—St. Kilda and the Lady Grange—The Hebrides—Coast of Norway—The Froy fiord—The Sea Eagle—Arrival at Tronyem—Quarantine—Visit of Mr. Broder Knudtzon and Mr. Oveson—Release from Quarantine.

On the 9th of June, 1834, I left London, and rested a day at that wonderful "Repertory of Arts," Birmingham, the greater part of which was passed at the Soho manufactory with Mr. Watt, who most kindly gave up his whole time to conduct me through the varied and extensive works carrying on at that place, and where, I understood, four hundred artificers were constantly employed in the manufacture of steam-engines and boilers alone:

* Far from being insensible of the too favourable manner in which my former little Volume has been received, or of the validity of the arguments of the kind reviewer in the *Quarterly* against changing the name *Drontheim*, in common use in Great Britain only, for *Tronyem*, universally so named in Sweden, Denmark, and Norway, if I still adhere to the latter, it is only for the sake of consistency, and not from conceit or obstinacy.

it was here that this stupendous, and almost omnipotent, machine was first constructed on a principle, which led to its present state of perfection, by that extraordinary genius, Mr. James Watt, the father of the present joint proprietor, with Mr. Boulton, of the Soho manufactory. Mr. Watt is the owner of one of the few remaining mansions erected in the reigns of James and Charles. It is named Aston Hall, and bears an inscription over the door, by which it appears to have been built by Sir Thomas Holte, about two hundred years ago, being commenced in the reign of James, and finished in that of Charles. In front it has a terrace 400 feet long, and 50 broad, fronting which within is a panelled gallery, 130 feet in length. The entrance-hall and state-rooms are very good; it stands in a park of considerable extent; and though so near the noisy and smoky town of Birmingham, it neither sees nor hears anything of its smoke, or its noise, nor are any of the multitude of tall steam-chimneys, which raise their heads into the air, visible from Aston Hall.

An attack was made on this ancient mansion by Oliver Cromwell, the traces of which still remain; one of the shot carried away part of the railing of the staircase, and lodged in the wall opposite. The notorious Prince Puckler Muskau has thought proper to remark, that the proprietor has had the bad taste to paint over the shattered part. Setting aside the question as to good or bad taste, the

shattered part remains just as it was—not painted over; he also complains of the want of a flower-garden; whereas there is a very extensive flower-garden and shrubberies, the latter remarkable, among other fine plants, for the magnificent rhododendrons with which they are adorned:—so much for this prince's accuracy. Mr. Watt can scarcely believe that this person ever set his foot across the threshold.

An inscription is prominent on one side of the Hall, conceived in the true old style of the times, and intended, apparently, as good advice and admonition to the servants:—

"If service be thy meane to thrive,
Thou must therein remaine,
Both silent, faithful, just, and true,
Content to take some paine.
If love of virtue may allure,
Or hope of worldly gaine,
If fear of God may thee procure,
To serve do not disdaine."

My first object, on reaching Liverpool, was a visit to the "Flower of Yarrow." My companions not having arrived, I took a hasty ramble over this extraordinary town—the second in commercial importance in the empire, and bidding fair one day to be the first. Already, indeed, its capacious docks, stretching in a long line parallel with the shores of the broad Mersey, from which they are separated by fine esplanades, and crowded with shipping—its broad and convenient quays bounded by lofty and extensive storehouses—the crowds of

people busily employed in lading and unlading the multitude of ships—in all these it may vie with the docks, the bustle, and the traffic of London; and they are here the more striking, from being concentrated and brought at once immediately under the eye. From this great emporium are distributed, by numerous canals and railways, the various articles of colonial produce and home manufactures—of Scotch and Irish provisions for feeding the industrious and swarming population of the numerous manufacturing towns and villages of Lancashire and Yorkshire, wherein are—

> ——— "All hands employ'd,
> Like labouring bees on a long summer's day."

By that wonderful rail-road, which connects the two greatest towns in the empire, are also conveyed the raw materials imported into the one to be manufactured in the other, and brought back again when so done, and with such rapidity, that it may almost be said to "annihilate space and time"—it has, in fact, converted Manchester into a suburb of Liverpool. The spirit of commercial enterprise which exists in Liverpool is equalled only by the liberal encouragement given to the promotion of science, literature, and the arts: it has its Lyceum, its Royal Institution, its Athenæum, its Public Library, its Botanical and Zoological Gardens, its Music Hall, Reading Rooms, and other places of rational recreation, instruction, and amusement.

Our party having assembled, and anxious to depart, we lost no time in embarking on board the yacht. It consisted of Mr. Charles Smith, the proprietor of the "Flower of Yarrow," the Honourable Richard Hely Hutchinson, and myself. The crew was composed of the master, an expert seaman, a mate who was engaged at Liverpool, and, being a good observer, and well skilled in navigation, he had the charge of the chronometer. There were, besides these, eight seamen, all young men, a steward, and "though last, not least" in importance, a cook. The yacht was 130 tons' burden, schooner-rigged, and well fitted in all respects. My two companions and myself had each a separate bed-room, and the sitting and dining cabin was roomy and convenient, being twenty feet by twelve. We were all elated with the prospect before us—my two companions with the pleasure they promised themselves, from the sport which Iceland would afford in shooting and angling, and I in climbing Hecla, and other volcanic mountains, and dipping my thermometer into the water of the boiling caldrons. But, as is too often the case, our anticipations turned out, in the issue, to have been too sanguine—less so, perhaps, in my individual case, as one of the principal objects of my voyage was fully accomplished—a visit to the Geysers, and the gratification of seeing them play in full activity; and this alone is, at any time, worth a voyage of a thousand miles in the Northern Atlantic.

On Sunday, the 15th of June, we got under weigh, and were very soon out of sight of Liverpool. The weather was fine, and the wind fair, which enabled us to pass the Isle of Man the same evening; but on the following day the wind had shifted to the northward, and blew very fresh. We had now arrived at the Western Islands, and at no great distance from Ila and those lofty peaks of Jura, usually known to navigators by the name of the Paps. Finding we could make but little progress against this strong and adverse wind, we tacked, and stood over for the island of Rachlin, situated at a short distance from the north-east coast of Ireland, under the lee of which we came to anchor in the small bay, laid down in the charts under the name of Achill Bay; and we were not a little glad to find ourselves in so sheltered a spot, as it continued to blow a gale of wind all that night, as well as during the whole of the following day.

The island of Rachlin presents a very barren aspect, the rock being, to all appearance, tabular basalt, or trap, exhibiting, however, on the side next to the anchorage, some faint indications of broken pillars, but wholly unlike to those columnar clusters which rise so conspicuously, in regular order, to the height of 250 feet on the Fairhead promontory, directly opposite to us; or to the more remarkable, but less prominent, pavement of columns, to the westward of Fairhead, which, descending with a slope into the sea, are well known under the

name of the Giant's Causeway. This causeway, as ancient tradition tells, and the credulous still believe, continues under the deep water to the island of Staffa, the palace of Fingal, or, as Sir Joseph Banks heard it named there, Fiuhn Mac Coul. On a clear serene day, when the sea is smooth and the sky blue, the fishermen tell you that the columnar causeway is distinctly visible at the bottom of the sea.

We had none of us the curiosity to go on shore at Rachlin: there was nothing, in fact, to invite one to do so; but a party of Irishmen, remarkably uncouth in their personal appearance, came off in a boat to dispose of some eggs and butter, as well as a few potatoes and some whiskey. The butter was by no means so bad as might have been expected from the barrenness of the island, at least in the immediate neighbourhood, and from the ragged and uncleanly appearance of the people; but it had a strong taste of peat, similar to that which is commonly supposed to exist in whiskey, and which in the latter is generally, I believe, much admired. We also procured a sheep from these poor people, which we were likely enough to have lost; for, while in the act of getting him out of their boat into the yacht, he contrived to jump overboard, and immediately swam out to sea: the jolly-boat was soon in pursuit of him, but whenever it approached within a short distance he exerted himself afresh, resolved rather to perish in the water than be

taken up: at all events, he gave the jolly-boat a good chase before he was taken, and afforded some little merriment to the sailors.

Having once more got under weigh, on the morning of the 18th, after a detention of about thirty-eight hours, we succeeded, with the help of a fresh breeze, to run, before it was dark, into the Channel between the Isles of Sky on our right, and Lewis on the left. Though the wind had blown almost a gale during the day, we were delighted to find ourselves, as the evening closed in, in comparatively smooth water. The heavy sea in the course of the day's run, and the wet from the spray which constantly broke over the yacht, gave our decks a thorough washing, and the water found its way into the cabins through some of the seams which had not been properly caulked, or which had, perhaps, opened a little from the working of the vessel. This defect in the yacht's deck was the unfortunate cause of retarding our arrival in Iceland.

As a matter of curiosity, I had indulged a hope that we might, in our passage, have approached that solitary rock, the most western of the Western Islands, in which I am certain I should have been gratified by Mr. Smith, had not the badness of the weather made it impossible. My wish to have visited the rock of St. Kilda was not for the gratification of witnessing the filthy and nauseous hovels of the nineteen or twenty poor families that exist there chiefly on fish and sea-fowls' eggs, nor for the

curiosity of taking a view of that only dwelling that has been stated to have a lock to the door, and to be set apart as the happy retreat in which a new-married couple pass their honeymoon. My curiosity extended no farther than to examine the rock formation of the island, and to pay a visit to the spot where the Lady Grange, after being secretly snatched from her home, was confined nearly twenty years. The story has been told by Boswell, and of course need not be repeated here*.

I had also hoped we might have visited the Faroe Islands, in standing across from Tronyem

* Walter Scott has given it with more precision than Boswell. "The story of Lady Grange," he says, "is well known; I have seen her journal. She had become privy to some of the Jacobite intrigues in which her husband, Lord Grange (brother of the Earl of Mar, and a Lord of Session), and his family were engaged. Being on indifferent terms with her husband, she is said to have thrown out hints that she knew as much as would cost him his life. The judge probably thought with Mr. Peachum, that it is rather an awkward state of domestic affairs when the wife has it in her power to hang her husband. Lady Grange was the more to be dreaded, as she came from a vindictive race, being the grandchild of that Chiesley of Dalry who assassinated Sir George Lockhart, the Lord President. Many persons of importance in the Highlands were concerned in removing her testimony. The notorious Lovat, with a party of his men, were the direct agents in carrying her off; and St. Kilda, belonging then to Macleod, was selected as the place of confinement." (*a*) When Boswell told the story, Dr. Johnson said, if Macleod would let it be known that he had such a place for naughty ladies, he might make it a very profitable island.

(*a*) Croker's *Boswell's Life of Johnson.*

to Iceland, but time would not allow it. As the intermediate step between the Shetland and Orkney Islands and Norway, to which they once belonged, it would have been interesting to compare the state of Faroe to that of these islands since their annexation to Scotland. These, however, were minor disappointments, and may be repaired at some future time.

While in the Duke of Buccleuch's service, the "Flower of Yarrow" had been rigged as a cutter, but Mr. Smith was advised to convert her into a schooner. The masts were exceedingly *taunt*, but she had within her no less than forty-five tons of iron ballast, so that, so far from being crank, she was remarkably stiff under her canvass. Some of our visiters at Liverpool, judging from the tauntness of the masts, pronounced her a dangerous vessel, and went so far as to predict that she would upset in the first gale of wind. I may hereafter have occasion to speak of her qualities as a sea-boat, and of the judicious alteration alluded to in her rigging.

While we were running for the channel of the Lewis Islands, we were not a little startled on hearing the captain call out hastily *hard-a-port*, words which, when suddenly vociferated, are generally of alarming import, implying something of danger to be avoided, at least they sound so to a landsman. We all seemed to think so, for in a moment we were upon deck, and found ourselves

close upon a sunken vessel. The broken masts were just rising out of the surface of the water, and there appeared to be a large body beneath; but whether it was merely the rigging and sails attached to the masts, or the hull of a vessel water-logged, we were unable to discern: I think, however, from the position of the masts, that the latter must have been the case. Running, as we then were, with a strong wind, at the rate of nine or ten knots an hour, we must inevitably have made a hole in the bottom of the yacht had we struck upon the wreck; and it was only by a sharp look-out and a quick shifting of the helm that we avoided doing so, by shaving close past her.

We shortly afterwards fell in with two whales, or, more properly speaking, finners, which I was a little surprised to see so far to the southward; but it is not unusual, I am told, to meet with a straggler now and then even in the English Channel. As this was the first time I had set eyes on these gigantic monsters of the ocean, I amused myself in watching their movements, as well as in observing their snorting and blowing, accompanied by jets of water spouted up to a considerable height.

On the 19th the wind moderated, and we enjoyed a beautiful passage through the channel of the islands, called the Minsh, keeping almost within a stone's throw of the coast of Lewis. The following evening we were abreast of Foul Island,

which lies at some distance from the chief cluster of the Shetland Islands. Here we were becalmed, with a high sea, a situation which, with the rolling of the ship, was anything but agreeable. The sun however set majestically; the clouds were beautifully tinged, and the constantly varying streaks of light in the sky remained for upwards of an hour after the great luminary had disappeared. It was just that sort of evening when

> ——— "parting day
> Dies like the dolphin, whom each pang imbues
> With a new colour as it gasps away,
> The last still loveliest, till—'tis gone, and all is gray."

The hope of fine weather thus held out to us was unfortunately not realized. On the 21st it blew what I should have called a gale of wind, and the sea became very high. Our little bark ploughed steadily enough through it for sailors to keep on their legs, but it required some firmness and nerve in us landsmen to walk the deck. While floundering about, I could not forbear a smile by being forcibly reminded of the quaint, but not inappropriate, lines of Dr. Johnson (not Samuel the moralist, but James the physiologist), a very accurate observer of nature,—

> "The glories of the ocean grand
> 'Tis very well to sing on land;—
> 'Tis very fine to hear them caroll'd
> By Thomas Campbell or Childe Harold;
> But very sad to see that ocean
> From east to west in wild commotion."

Instead of the fine weather we had anticipated

from the appearance of the sky at and after the setting sun, the rain began to pour heavily, and continued till the 23rd, when we were agreeably surprised to find ourselves off the coast of Norway; and, not having had an observation, we had stretched a little farther to the northward than was intended, and were opposite to *North Suulen*, at no great distance from the *Titterheads*. We knew our position, as it cleared up, by the tower or light-house on the Suulen Island, the position of which certainly affords no unnecessary precaution for navigators, as the coast here is one cluster of rocks, some above and others below the water, spread over a surface of not less than 200 square miles. When off Titterheads, and before we were aware of it, we had happened to run into the midst of a large shoal of mackerel, and our people set to work to fish for them, and as fast as the line could be drawn up our sailors hoisted in some of these fish.

We edged away a little to the southward, and then for several hours stood off and on, before we succeeded in getting a pilot on board; but the day being fine, several fishing-boats were out, and from them we ascertained that the regular pilot ground was more to the northward: we therefore returned towards that quarter, and were fortunate enough to get a pilot soon afterwards; he had been fishing all night with his son, and having observed us at a great distance, came down to us. Being *en*

deshabille, his clothes much tattered, he begged to be allowed to send his son on shore to his home, to procure some better apparel, as he wished to appear more smart in piloting us up to Tronyem, the capital of Norway. There are several fiords that lead from the sea up to Tronyem, but that into which we entered is called the *Froy* Fiord. It is inclosed at its entrance between Froyen Island on the left, and *Hitteren* on the right, and beyond these, between two long ridges of rocky islands, we could see at a distance to the southward, some hills, or rather mountains, of considerable height, whose summits were capped with snow: two of the highest of these appear by the chart to bear the names of *Fonna* and *Tusteren*; but the nearest to us on the right was the large island of Hitteren, which was said to abound with red deer.

Vast numbers of the great sea-eagle (*Falco ossifragus*, of which our word *osprey* appears to be a corruption) were hovering over the surface of the water, and busily employed in chacing their prey. It was amusing enough to observe them grappling with some of the larger fish, which were sometimes able to offer such resistance, as to drag them almost under water, so that the finny tribe were here less complaisant to, or less terrified by, their voracious assailants, than in some other countries, where, according to Sir Thomas Hanmer, it is reported that when one of these huge birds "hovers in the air, all the fish in the water turn up their bellies, and lie

still for him to seize which of them he pleases." If the Norwegian oxen had half the spirit of the hakes and halibuts, they would not suffer themselves to be swindled out of their lives by these bone-breakers, as Pontopeddon has related, and as Von Buch is inclined to believe they are, on the coast of Norway. A number of seals were sporting about, and the sea-gulls were abundant in this fiord: they were very noisy in the pursuit of their prey, to seize which they would

——— "in the ocean dive
With eager scream."

The wind having failed us, we made very little progress until the following morning, when a favourable breeze carried us a long way up the fiord; but about mid-day it again fell almost calm. For many miles the rocky mountains which inclose the fiord continue to be totally barren, and the snow, sheltered from the rays of the sun, was lying in some spots very near to the water's edge. Here and there, however, we got sight of a green patch, with one or two small wooden houses near it, and occasionally a little wood-built church situated close to the water's edge; and at one spot, the pilot pointed out what he called a nunnery, which, if so, is the only one I ever heard of in all Norway. As we proceeded up this beautiful navigation—for, with the clear water and the romantic rocks on either side, it was beautiful, even without any ornament from the vegetable part of the creation,—a fishing-boat

came alongside, and our sailors purchased some good fresh fish, for which the boatmen were quite satisfied with receiving a few English halfpence, though they knew nothing of their value; but which I hope would prove of more use to them than our sovereigns did when I was at Tronyem last year with my friend Mr. Rouse.

Standing to the south round the *Herr* Islands, we approached a reach of the fiord between *Brettingness* and *Walsetholm*, and here the inclosed mountains began to assume the appearance of a more extensive verdure, and many of them were entirely clothed with coppice-wood, chiefly of birch, and with pine-trees near the water, of considerable size. Here, also, we observed a great number of eider-ducks and sea-gulls of different species. As we approached *Stadboyden's* church, near a point of land called *Rodberg*, and when at the distance of about eight miles, we were gratified with the sight of our old acquaintance, the Castle of Munkholm, rising quite alone out of the blue water of the fiord. The town of Tronyem being situated in a bight of the fiord, is not visible from Rodberg, and can only be seen when within a short distance of it.

The weather, during the last two days, happened to be beautiful; and nothing could exceed the pleasure we all experienced in our passage up this noble fiord. Several boats were sailing about in different directions, and we observed, as we passed along, a

few small vessels at anchor in the several creeks and inlets of the fiord. The boats appeared to be all of the same kind as those used by the fishermen, and similar to those I had been accustomed to in crossing the various fiords between Bergen and Tronyem in the course of the preceding summer. They are well built, and not ill-shaped for rowing, and I have reason to believe are very safe.

Norwegian Boat.

The wind continuing light, and at intervals dropping altogether, we did not reach the anchorage off the town of Tronyem till ten o'clock in the evening, which was then, of course, broad daylight. The moment we arrived, a visit was paid to us by the quarantine officers, who seemed, by their cautious manner, to be somewhat alarmed at our approach to the town, lest we should have brought the cholera to their shores; and no wonder, since it was then devastating Gottenburg, and even Christiania. I could not, however, forbear smiling at the very ab-

surd precaution they thought it necessary to take, by receiving the piece of paper, which contained the particulars respecting our yacht, between a pair of nippers or tweezers, and immediately plunging it into the sea, as a substitution, I suppose, for the usual process of fumigation. We were immediately desired to hoist the green flag, and told that no one could be allowed to land, nor any kind of communication be held with the shore; and the next morning we were duly informed that we must perform four days' quarantine, as we were unable to produce a clean bill of health—a precaution which, as we had not come from any infected port, we had not thought of taking, having no reason to expect that such a demand would have been made upon us.

This strict observance of the rules of quarantine, which was, perhaps, very right and proper, was the more vexatious, as we were all in a high state of health on board the yacht; whereas we were told that, on shore, the small-pox was raging with great violence. Our poor pilot had informed us, as we entered the fiord, that he had lost two of his children by this disease a few weeks previous; and he now learnt, from the quarantine officers, that his daughter, who was a servant-girl at Tronyem, was lying dangerously ill—in fact, at the point of death. The poor man was sadly overcome at this intelligence, and, with tears in his eyes, implored the officers to be allowed to go on shore, to see her

before she should be for ever parted from him in this world; but his request was unheeded, or, at least, could not be complied with; and, on the day previous to our release, he received the melancholy intelligence of her death. The refusal to let him land appeared to us unfeeling enough, but we were not competent judges of what was deemed necessary for the public safety, having, fortunately, in our happy country very little occasion to place either its own subjects or foreigners under such restraint. We all of us felt deeply for the poor fellow, and could not help contrasting the joy with which he first put his foot on board the yacht, and his present forlorn condition. In the early part of our passage up the fiord, when his son returned on board with his father's clothes, some of his younger brothers accompanied him, who all appeared to have recently had the disease. As a great treat, he begged that he might be allowed to give his children a little of the ship's biscuit; and on leaving the vessel at Tronyem, he also requested that he might take a few home with him, to give to his family.

We had not been here long in a state of confinement, before we received an unexpected and most welcome visit from Mr. Broder Knudtzon and Mr. Oveson, who most kindly came on board, and were of course obliged to remain and keep quarantine with us—an instance of disinterested generosity

and friendship worthy the character of these two estimable men: that of Broder Knudtzon is too well known in England, I might say Europe, to require any eulogy at my hands. He seemed to be a little surprised when Mr. Smith told him to prepare himself for a trip to Iceland. "To Iceland!" he exclaimed, "I thought you were to take me to the Mediterranean?" "I mean to do so," was the reply; "but I intend to visit Iceland on our way thither." On the 27th it blew strong from the westward, and, though anchored close to the town, the fiord became very rough, and our little yacht tumbled about a good deal. We were told by the inhabitants, that, at a certain period of the day, during the summer months, a strong wind invariably blows from the west, although for the remainder of the day its direction may be from the opposite quarter: it is called, I believe, the sea-blast. At night, during this season, the wind is sure to blow off the land.

On the fourth day we were released from quarantine, and having found, from experience, that it was necessary to have the yacht's decks caulked, and some other defects made good, previous to our again putting to sea, which I had reason to believe would occupy a week at the very least, I lost no time in making arrangements for a journey in this part of Norway as far as *Röraas*, to visit the copper-mines of that place, and, if possible, to extend my

rambles to the nearest spot in possession of the Laplanders. I mentioned my intention to Mr. Knudtzon, who very kindly offered me the loan of his carriole, and gave me directions for the journey.

Tronyem from the Anchorage.

CHAPTER II.

FROM TRONYEM TO RÖRAAS, AND VISIT TO THE LAPLANDERS.

Valley of the *Guul* River—Villages of *Rogstad, Bogen,* and *Kirkvold*—Captain Greene and Lieutenant Breton—Carts proceeding to the Fair of Tronyem—Courteous Behaviour of the Peasantry—Cascades—Song of the Peasant Girls—Smelting-house of Ejda—Beautiful Children—Valley of the Glommen——Röraas—Smelting-houses—Population—Road to the Laplanders—Mountain Scenery—Oresund Lake—Myhrmoe—Laplanders; their Portraits—Sæters on the Mountains—A Lapland Woman—Huts—Inhabitants; their Character and Condition—Return to Bekosen—A remarkably fine Family—Copper-mine of *Storvartz*—Nature of the Operations—Wages of the Miners—English Association for working Mines in Norway—Return—Salmon Fishing—Horrible state of the Road—Arrival in Tronyem.

HAVING sent forward a forebud to secure horses on the road, I started at an early hour on the morning of the 29th of June, on my intended journey to Röraas, about a hundred miles from Tronyem. The road I had first to travel is the same as that which is commonly used between Tronyem and Christiania, passing over the Dovre Fi-eld; but the Röraas road turns off to the eastward a little before reaching *Soknœs,* and follows the beautiful valley of the *Guul* river, in an opposite direction to its stream, for many miles, and continues nearly to the spot whence it derives its source. The drive along this

valley is exceedingly picturesque, and more particularly so in the neighbourhood of the three villages of *Rogstad, Bogen,* and *Kirkvold.*

At Rogstad I had the pleasure to become acquainted with Captain Greene, of the Royal Navy, to whom I had conveyed a letter of introduction from Mr. Hutchinson. He was residing at the post-house of this place, and although alone, he told me that, since he had taken up his abode there, he never found time to hang heavy on his hands, having all the patience, and being as "complete an angler" as Izaak Walton himself, the prince of anglers. I found him standing with his rod in his hand at the river-side, and noticed four or five good-sized salmon lying on the bank, which he had hooked and brought to land that morning. I arrived just at the lucky moment to be able to congratulate him upon his success, as he was landing a fine fish, being the fifth.* A Norwegian peasant, who seemed to be up to the business, was attending him. Captain Greene very kindly offered me his rod, but as I had not been initiated in the art, and had still some distance to go before I should reach the end of my day's journey, I did not avail myself of his politeness. At this spot I also met Lieutenant Breton, of the Navy, the author of "Travels in New South Wales." The latter officer, like myself, was driving one of the little Norwegian carrioles towards

* Since my return I have seen Captain Greene, who informs me that, in thirty-two days' fishing, he caught ninety-four fine salmon.

Tronyem, and, like myself, was changing horses at Rogstad. He had some idea, he told me, of proceeding to the North Cape, but did not, however, carry his plan into execution; for I was not a little surprised to meet him again at this same spot on my return from Röraas, when I learnt that he had very wisely given up the trip, and was about to proceed to examine the southern part of the country, which could not fail, I should imagine, to be far more attractive. He had held out to me but little encouragement to pursue my journey to Röraas, but advised me particularly not to attempt a visit to the Laplanders, with whom, it appears, he had fallen in, after a great deal of fatigue and no little danger in crossing the *Oresund* Söe in a small boat, and subsequently in riding over some deep morasses in the mountains. Having, however, undertaken the expedition, I could not allow myself to be disheartened or diverted from it, but determined to take my chance.

Kirkvold being about half-way to Röraas, I passed the night here. Thus far I had proceeded without overtaking the forebud—a somewhat unusual circumstance when despatched but the previous evening. Although the post-house is situated close to the banks of the river, in which the salmon is said to abound, I was not fortunate enough to procure any for my dinner, which consisted of eggs and bacon and some excellent gammel ost. These articles, together with some rich cream and coffee

—the usual bill of fare at a Norwegian post-house—enabled me to make a very tolerable repast.

Numerous little two-wheeled carts following each other, like the caravans I have seen in Russia between the two cities of Petersburgh and Moscow, had met me on the road at all hours of the day. Many of these were laden with copper from the mines, but the greater part were conveying articles of various descriptions for the grand fair, or annual market, which was about to be held at Tronyem, and to which place they were all proceeding. Many parts of the road were so narrow, that it was a matter of some difficulty to pass each other without collision. With the exception of one party of peasants, who were conducting from thirty to forty horses towards the city, I did not observe that they had other kinds of cattle to dispose of. It was pleasing to remark the courteous behaviour of the peasantry, who invariably in passing wished me good-day, and generally removed their caps from their heads, holding them in their hands till they had passed the carriole.

Previous to reaching Kirkvold, I noticed a fine waterfall at no great distance from the road; and on the following morning, two beautiful cascades rushing down the mountain side, bounding from rock to rock, and pouring their waters into the Guul below, particularly attracted my attention as I passed over the wooden bridges which have been thrown across them. As far as to a place called

Hov the mountains on either side were covered with forests of fir trees, but almost immediately after leaving that place, and ascending to a higher level, nothing but birches were to be seen,—the sudden transition from the one to the other being very remarkable. The lower parts of the mountains, sloping gently down to the river, were clothed with large open patches of rich pasturage; and numerous clusters of cottages were everywhere scattered along their sides and the banks of the river. The Guul here becomes very narrow and, rushing in a torrent down the mountains, is entirely lost sight of from the road at no great distance from its source. In going along this route I observed that, wherever the birch-tree thrives, the pasturage is remarkably rich, and very scanty among the fir forests, unless they are mixed with birch, or that birch is growing plentifully in the immediate neighbourhood.

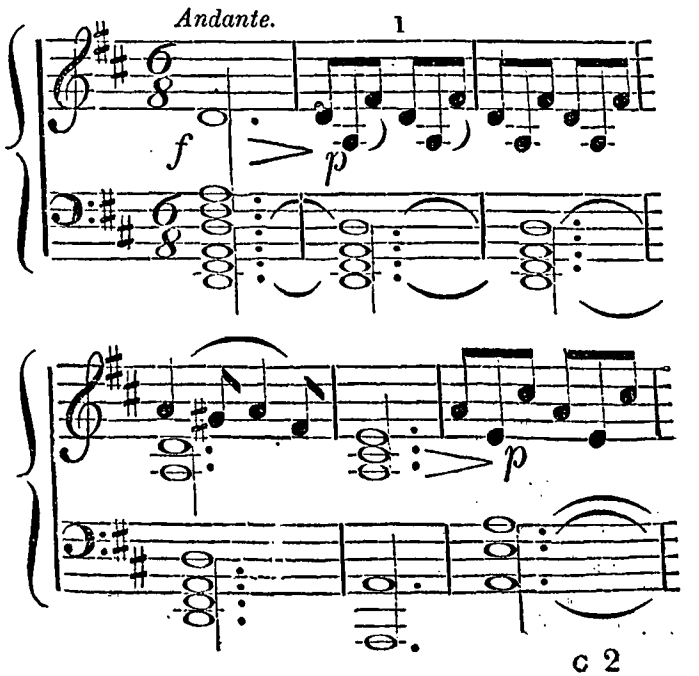
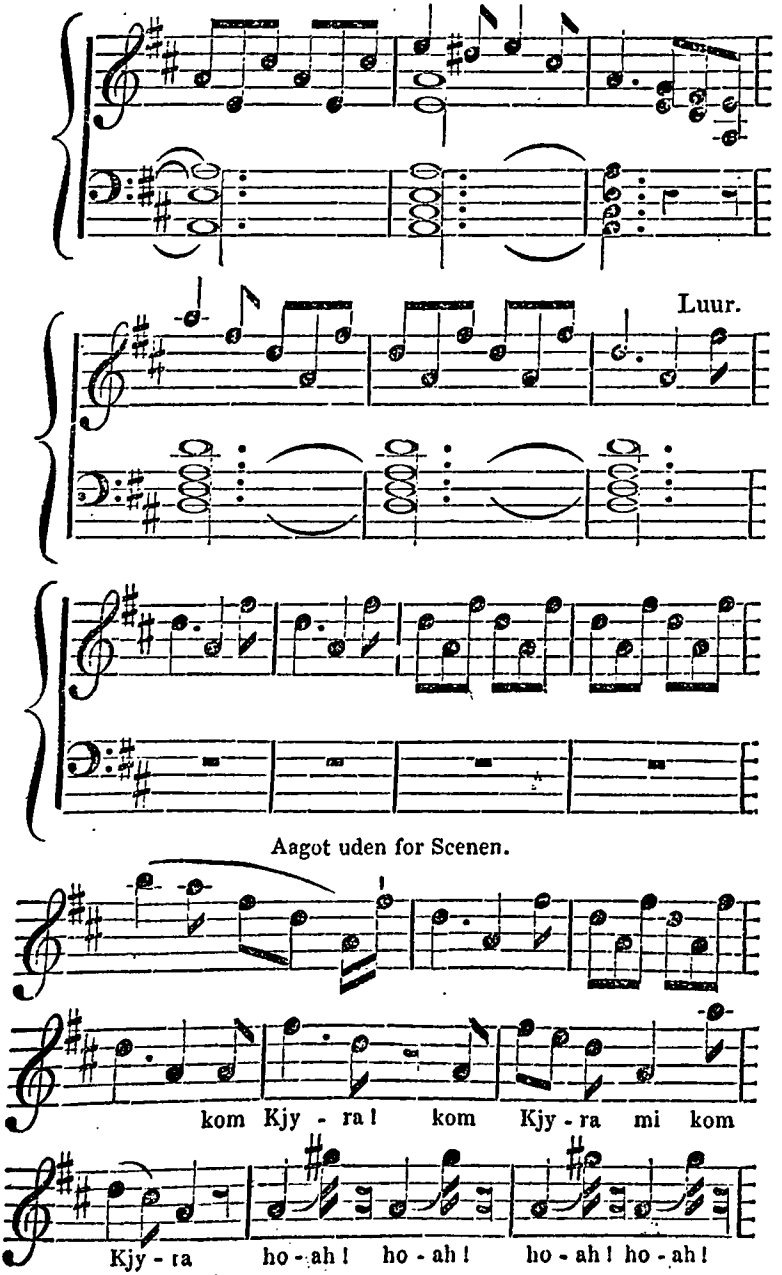
On the sides of the mountains of this valley I had the pleasure to hear, what I had often before heard, the peasant girls at their several *sæters*, or summer pasturing stations, calling the cattle together by a song which is in universal use—a sort of *ranz des vaches*. This song is, in fact, felt throughout Norway much in the same manner as the latter is among the Swiss, and is perfectly understood by the cattle themselves, who immediately answer the call. The air has been adapted by a Norwegian gentleman to the piano-forte, and having obtained a copy of it at Tronyem, I subjoin it, with

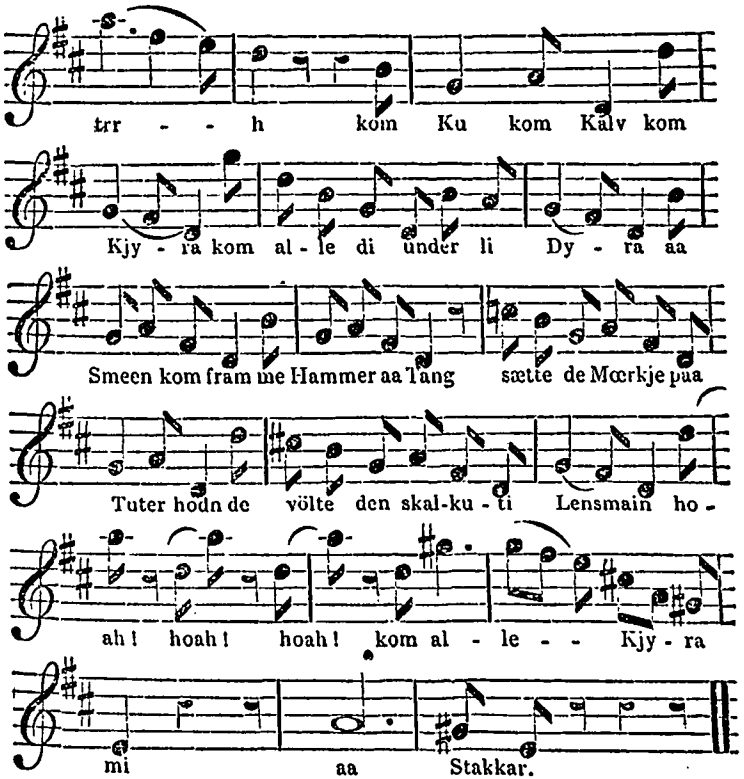
the words, and a free translation, in the hope that it may not be less pleasing to my fair country-women than, in its original state, it was to me; though the romantic situation, no doubt, contributed not a little, like that of the *ranz* in Switzerland, to produce the enchanting effect. The first stanza only is what the girls usually sing in calling their cattle to be milked, with

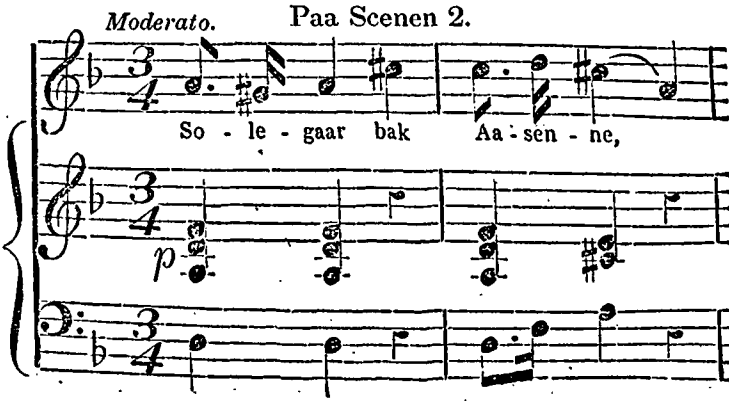
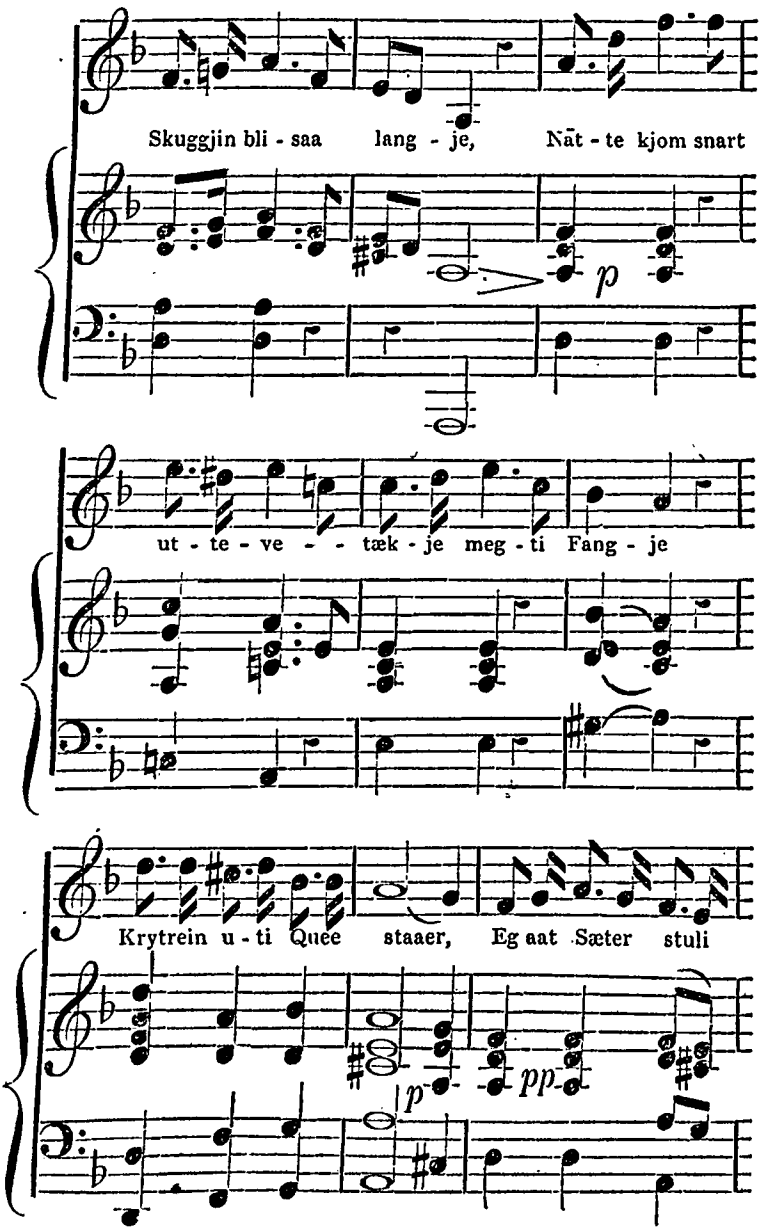
"Come, my cows, come,
Come, my little calves," &c.

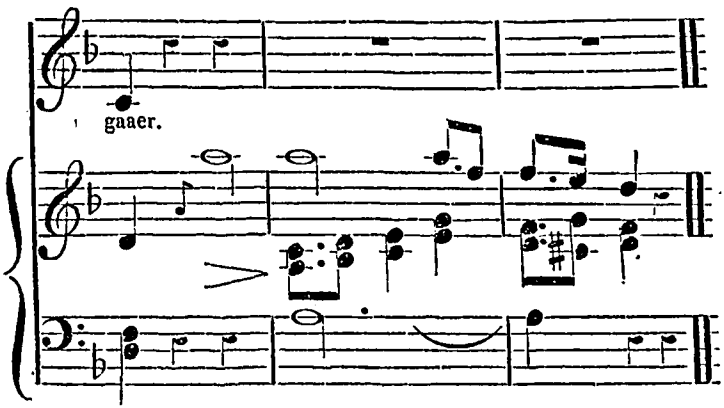
The simple air is very pretty, but the words will not bear a translation; I have, however, added a translation of the other three stanzas.

AAGOTS FJELDSANG.



Luur.
Aagot uden for Scenen.
kom Kjy - ra! kom Kjy - ra mi kom
Kjy - ra ho - ah! ho - ah! ho - ah! ho - ah!

trr - - h kom Ku kom Kalv kom
Kjy - ra kom al - le di under li Dy - ra aa
Smeen kom fram me Hammer aa lang sætte de Mœrkje paa
Tuter hodn de völte den skal-ku - ti Lensmain ho -
ah! hoah! hoah! kom al - le - - Kjy - ra
mi aa Stakkar.

Paa Scenen 2.

Moderato.
So - le - gaar bak Aa - sen - ne,
p

Skuggjin bli - saa lang - je, Nāt - te kjom snart
p
ut - te - ve - - tæk - je meg - ti Fang - je
Krytrein u - ti Quee staaer, Eg aat Sæter stuli
p
pp



3

Myrkt de œ ti qvar ei Bygd,
Ti de djupe Dale ;
Her paa Fjeill ha Sola drygd
Mœ aa gaa taa gale
Test eg gvile onde Tak,
Maar gaa œ ho tile vak.

4

Snart eg œ naa klar i Qvel,
Saa gaar eg te Qvile,
Söv saa roleg onde Fell
Test i Maar gaa tile,
Nœr eg da ha somna in
Drömmer eg om Guten min.

TRANSLATION.

2

The sun is sinking behind the mountains,
And the shadows grow longer;
The night is fast approaching
To fold me in her arms.
The cattle are now in their sheds;
I wend my way to my mountain hut.

3

Darkness dwells o'er field and farm
In the lowly valleys;
While on the hills the sun has lingered
To light me to my home,
Till I shall reach my humble couch,
On the morrow to rise with him early.

4

My task to-night will soon be done,
And then I go to lay me down,
When sleep shall visit my fur coverlet
Till day begins to dawn,—
Sweet sleep, the welcome guest,—
When I shall dream of my love.

Before reaching Hov I had passed through a village named *Ejda*, where the copper ore, from a neighbouring mine, undergoes the process of smelting. A new smelting-house appears to have been constructed at this place, as I understand, during the last year. The building was small, and contained only three furnaces; but I was told it was built on a good plan, and answered well the purpose for which it was intended. It would be difficult for the imagination to picture to itself a wilder spot than Ejda; the river rushes with impetuosity through a chasm in the rocks, and falls in a loud noisy torrent beneath a stone bridge of two arches, through which the water dashes, being first broken in its fall by a rock that serves for the central buttress of the bridge. Above this spot there is a second fall of the river, near which the smelting-works are situated.

Much rain fell during the day; the roads were very heavy, and the stages long, so that the journey was not a little tedious, particularly as our route was across some mountains of considerable height, beyond which the town of *Röraas* is situated. The last stage from Hov was not less than twenty-four miles, and of one continued ascent the whole way: the poor horse which was harnessed to my carriole could scarcely stand upon his legs when I drove into the town. I had been obliged, indeed, to stop in the course of this stage, to allow of his being unharnessed and turned out on the mountain

for a short time to roll himself and to feed. It is quite surprising how the small Norwegian horses can endure so much fatigue as they commonly undergo, especially when it is considered that they are fed entirely upon grass, and never taste a single particle of grain.

The road had attained a considerable height in crossing the mountain, and snow was lying in large detached spots in many places even lower down; yet on the very highest point, or nearly so, several patches of birch-trees were growing; and what was to me very surprising, I here heard the note of the cuckoo, which, in my ignorance, I should have thought was at too great an elevation for a bird of that species. Subsequently, however, I heard him at a still greater elevation—not less than 3000 feet above the level of the sea.

At the spot where I stopped to rest my horse, I had an opportunity of witnessing, as I had already frequently done, both in this and my former excursions, the decent and well-behaved manner in which the children of the peasants are brought up. The spot was a miserable cottage, situated by the roadside, without a human habitation for many miles near it; yet, on entering the hovel, I found three little children, the eldest not ten years of age, and the youngest only about three; to each of them I gave a few skillings, in value about a penny: immediately they all held out their little hands to me, and the mother, on her return, having heard from them what I had given them, was equally ready with her

children to express her thanks by the usual mode of offering her hand, or rather taking hold of mine. I have generally observed that the children of the peasantry are healthy and well-featured; but these little cottagers were really beautiful.

It would appear that money, in this part of Norway, is very scarce, and that a few skillings even will go a great way: indeed, I seldom saw more thankfulness, and a stronger expression of gratitude depicted in a man's countenance, than on the occasion of my giving something less than twopence to a peasant, whose house I had entered during the day's journey, and partaken of a large basin of rich milk and some excellent butter, and for which he also shook me very heartily by the hand.

At the distance of about a Norwegian mile (or seven of ours), before reaching Röraas, down the descent on the other side of the mountain, the road comes upon the banks of the *Glommen* river, which takes its rise in the same range, but at some distance to the northward. It is first seen from the road in the shape of a torrent foaming over its rocky bed, but before it reaches Röraas it has become a broad tranquil stream. It was late in the evening when I arrived in the town, after being two long days upon the road, which may be considered as no bad driving in Norway, the distance from Tronyem being reckoned at fourteen Norwegian, or about one hundred English miles. I had been told that there were two or three lodging-houses for travellers in Röraas, whose occupants have agreed

among themselves to take it in turn, every week or fortnight, to accommodate strangers.

Röraas is a remarkable-looking place, being bleakly situated on the side of a barren mountain. The principal objects that attract a stranger's notice are the Smelting-House, the Roasting House, the enormous mounds of slags, something like those near the smelting-works of Swansea, and the Church, which is of considerable size, and was built, as appears by an inscription over the door, so late as 1780. The interior struck me as being nearly as large as that part of the cathedral at Tronyem, in which the service is performed. The arrangement is somewhat singular, the pulpit being placed immediately over the communion table; and above it is the organ-loft. This plan, I am told, is generally now adopted in the building of the Norwegian churches, particularly in those of the octagon form: but I have not before observed it. A picture of the Lord's Supper decorates the altar; it was painted, as I was informed, by an artist of Tronyem about twenty years since, and is by no means a bad specimen of the arts. There were besides two or three portraits here, one of which was that of Martin Luther. Behind the altar is a small chapel, in which prayers and exhortations are read by the clergyman to intended communicants, the day previous to their receiving the sacrament. The seats in the gallery of the church are divided into separate pews, similar to those in the cathedral at

Tronyem—more resembling the boxes of a theatre than the usual seats in a place of worship.

Church at Röraas.

I may here observe that the smelting-houses are in the town of Röraas, to which all the ore from the mine is brought. The great smelting-house is

a very old building, nearly worn out, and, as the concern is a thriving one, it was said to be in contemplation to build a new one during the ensuing year. It contains seven or eight furnaces, which were nearly all in full work during my visit: the blast bellows for heating them are worked by water wheels. As I had not yet visited the mine, nor ever seen the works usually connected with one, the different processes of smelting and roasting the ore were viewed with much interest by such a novice.

The population of Röraas is stated at about 1500 souls. There are a few well-constructed wooden houses in the town, but the greater part are miserable enough: they are built of logs of wood, are very low, and the roofs covered some with turf, some with sods, and others with slags; and when viewed from an eminence, have a singular effect. Numerous detached huts, standing singly in the middle of the fields, which are here enclosed by stone walls, are scattered around the town, and these I learned were used as repositories for hay for the winter consumption of the cattle. The elevation of Röraas above the level of the sea is marked down, on Mr. Forsell's Chart, at 2260 feet, and that of the principal mine is said to be upwards of 3000 feet.

Immediately on my arrival, I called upon Mr. Schult, the director of the mines, to whom I had the pleasure of conveying a letter of introduction from Mr. Knudtzon. He received me with great

kindness, and I felt myself much indebted to him for his valuable assistance, in making arrangements for a little journey I had in contemplation, to pay a visit to the nearest station of the Laplanders, and in procuring a guide, who was well acquainted with the neighbouring mountains, as well as with the haunts of this singular race of beings; and also for his attention to my wishes with regard to seeing the great mine near Röraas, and the different works connected with it, on my return.

Having made all the requisite preparations for my departure, in search of the Laplanders, I started from Röraas on the 1st of July, on horseback, leaving my carriole behind, as the road at a short distance farther on was no longer practicable for a wheel carriage. I took with me a small bag, with a tarpaulin over it, in which were my provisions, and a few other necessary articles. My servant accompanied us on the expedition, and I could not help thinking how much we resembled Don Quixotte and Sancho Panza in our equipment. I had arranged to go direct to the Laplanders, and not to stop at the mine, in order that I might pursue my journey to the *Oresund Söe*, or lake, without interruption. A carriage-road continues as far as the mine, and there ceases, so that beyond it we had only to look for a bridle road, and scarcely even that. In some places we found it rough riding enough; the horses frequently sunk up to the belly in mud, and snow was lying in

large masses in the crevices close to the road-side—permanent as it would appear—for wherever it was accumulated in spots where the rays of the sun never reached it, it was there hard frozen into a mass of ice.

The country now began to wear a desolate and inhospitable appearance; and the spot where the principal mine was worked looked dreary and barren in the extreme, as we saw it at a distance; but I had been much struck with the firm and vigorous step, and the stature of the men, along the whole line of country between Röraas and the mines: most of them were above the middle size, and many were above six feet in height, well-limbed, and apparently strong in proportion.

A little further on, some picturesque mountain scenery began to present itself to our view. Behind us, to our right, rose the rugged peaks of *Saalloa* fi-eld, almost entirely enveloped in snow, as was also the *Kampan* fi-eld, a bold mountain, at the back of which rises the *Rue Hammer*, where the copper ore was first discovered about two hundred years ago, and where, as it would appear from the account of the Frenchman's narrative, (mentioned in the Introductory Chapter,) one mine, at least, in this neighbourhood was worked in the year 1670, now 164 years ago; and, as it would appear, much in the same manner as now; only then the great wheel employed to draw up the ore was turned by men, which is now turned by water.

The *Aarsberg* fi-eld, partially covered with snow, bounded the view on our left. In about four hours' travelling we arrived at a little hamlet on the Oresund Söe, called *Bekosen;* and here we left our horses to remain till our return, crossing the lake in a small crazy boat, which leaked not a little, to a place named *Myrhmoe,* the distance being about five English miles, which our boatmen, one of whom was our guide, contrived to accomplish in about an hour and a-half. Here I passed the night in a small cottage, which was very neat and clean.

Our kind hostess was full of apologies for being taken unawares, not having expected any travellers, especially strangers, so suddenly coming upon her. She was just then busily employed in scouring a room, in which it happened I was destined to sleep, but which she had so deluged, that it would have taken at least four-and-twenty hours before it would be dry, and I was obliged to decline occupying it. She had no other apartment except a closet, full of clothes and other household articles, and in this I contrived, being somewhat fatigued, to doze away a few hours.

The cottage was surrounded with a considerable extent of rich pasture ground, and the good lady of the house, who happened to be the sister of our guide, possessed no less than fourteen cows, so that I was well provided during my stay with butter, milk, and cream, of which I have seldom seen a

more abundant or neat supply, in any of the peasants' houses in Norway. In addition to this stock of cattle, she could boast of three fine oxen, and five calves, two horses, twenty-two goats, and a few sheep, which made up the sum total of her live-stock, and of which she seemed, as well she might, to be exceedingly proud. She was much pleased with the praises I bestowed upon the dairy, and still more so, on my requesting to be allowed to have a look at her live-stock. The cows, which were of a very small breed, and mostly without horns, were arranged in neat order, in a well-constructed shed, having seven or eight stalls on either side, and the calves were kept distinct at the end. The oxen were tied up in a separate shed, and having exhibited these, the flower of the flock, she wished me to see the goats also, and for this purpose she took the trouble to have them all assembled in a field near the house. This good woman apologized for the absence of her husband, who, she said, was gone into the mountain to cut wood for winter fuel; he would otherwise have been happy to procure me some good fish, with which the lake is said to be well stocked, but more particularly with fine salmon-trout.

She was, however, able to supply me with some dried beef, called, I believe, "*Speget Kjöd*," which is salted and hung up to dry either in the sun only, or smoked in the chimney-corner. Her young family was small; it consisted of a boy and a girl,

the latter about five years old, both, like the generality of Norwegian children, healthy and remarkably pleasing in their manners.

In a small cottage in the neighbourhood a family of Laplanders had taken up their temporary abode. A little Lapland girl, between seven and eight years of age, of a small stature, was alone in the cottage, her parents being at no great distance. On giving her some small pieces of money, she immediately, after the Norse fashion, put her hand into mine—a cerémony which, in this instance, I should certainly have dispensed with, if I had observed, before it was too late, that the poor little creature's hands were in a very unhealthy state. By the immediate application of soap and water, I had the good fortune to escape any ill effect, and it was a lesson to me to keep on my gloves for the future, which, although it may be considered a piece of affectation, was nevertheless indispensably necessary to avoid contagion.

In a short time the mother came in; she appeared to be a very good-humoured person, and, being the first of her nation I had met with, made no objection to my request to take her portrait; but not so the child, who cried a little at first, because she said I looked too much at her mother, but she was soon quieted with a basin of milk or cream. When I had nearly finished my sketch, the mother said that her head was not so nicely drest as it ought to be, upon which she ran out of the room,

A LAPLAND FAMILY.

and returned with a different cap; but as the alteration was trifling, I have retained the sketch as it was first made. This little trait is characteristic—I do not mean of female vanity, but—of that desire to please, however humble and lowly their situation in life may be. I had scarcely finished my sketch when the husband came in; whom I immediately set down in my own mind, as a far less agreeable looking person than his wife. I offered to take his portrait, as an accompaniment to that of his mate, but he seemed rather unwilling to allow me to do so: however after assuring him that I only wished to have it to show to my friends, at a distance, how the Laplanders wore their clothes, and by coaxing him with a few skillings, he at length stepped out, with all the dignity he could muster, into the centre of the room. It was as much as I could do to refrain from smiling at the ludicrous and self-important manner in which he took up his position, and the awkward attitude into which he threw himself, for the purpose of having his graceful figure transferred to paper. Having finished my sketch, they both complimented me by declaring how very like the two portraits were, and that they knew each other again immediately.

The woman was inclined to be very friendly and communicative; she showed us a written paper, which had just been issued by the magistrate of the district, stating that wolves had lately been observed in great numbers, and cautioning people

to protect their cattle, and not to go far from home without fire-arms. In the winter this piece of information would have been somewhat alarming to a person who was on the point of penetrating the mountains, but during the summer, when the wolves are rarely pressed with hunger, and as rarely show themselves, there was little cause for alarm. I was not sorry, however, to have escaped an interview with them under any circumstances.

Having, as I have said, passed one or two pleasant hours of sleep at the cottage of my hostess, to which I returned from my interview with these Laplanders, I arose soon after two o'clock the following morning, and mounted my horse, accompanied by my servant and the guide. The weather still continued provokingly unfavourable for such an expedition, and it rained almost without ceasing the whole day.

Our route was up the ascent of a mountain, through an almost interminable forest of birch-trees, healthy and vigorous enough near the foot, but which, as we approached the summit, presented a scene of destruction which I was little prepared to expect. Many of the trees were torn up by the roots, others were stripped of their branches, and many were completely rent through the stems as if split by lightning; these were evidently the effects of a destructive and desolating hurricane. In proceeding through this forest, we found the ground so saturated with rain, that the horses were

repeatedly above their knees in the bogs, through which we had to wade, and it was with some difficulty that we could prevail on them to proceed. Besides the bogs, the poor animals had also to wade through several streams that crossed the path frequently up to their bellies in water. In many places snow was lying to a great depth, but by passing along the outside edges of each patch, and thus making circuits, we avoided the risk of crossing it, and of falling, probably, into some concealed chasm; but as the outer edges of the snow were invariably a complete swamp, we gained little more than safety by making the détour.

In the early part of our ride we passed three or four of the sæters, or pasture-grounds, in the mountains, where the cows are taken to graze for two or three months during the summer, and placed under the charge of the young girls of the family, who are employed in making butter and cheese during that period. None of these sæters were occupied at present, but the guide told me they would all be so in the course of a fortnight. The grass at these places was exceedingly luxuriant. Our guide pointed out one of the sheds where a poor fellow was found frozen to death during the last winter. It was supposed that he had gone in there to rest himself and, being over-fatigued, had fallen asleep, and thus lost his life. Nothing, indeed, can be more miserable than these temporary abodes are, both as to their construction of loose stones, and their

position amidst the mountains. As we proceeded onwards, we came very near upon the *Reien* Söe, a lake which feeds the Oresund Söe, and out of the latter of which flows the *Glommen*, one of the finest rivers in Norway. The height of this lake is marked down in Forsell's map at 2475 feet.

Having passed through these forests of birch-trees, we reached a part of the mountain, which was so barren as to exhibit scarcely any signs of vegetation, save here and there a scanty bed of moss or lichens, the most common of which was the *rangiferinus*, or reindeer moss; yet here we discovered three wretched-looking hovels, built of sods—they were those of some Laplanders, whose summer residence was in this neighbourhood. The only human being near them was an old woman, who was busily employed in boiling some reindeer milk. She was, without exception, the ugliest creature, in the shape of a human being, that I ever set eyes on: she was precisely one of those beings whom, as Dr. Clarke has observed, a person unaccustomed to the appearance of them, meeting one suddenly in the midst of a forest, would start from the revolting spectacle: "The diminutive stature, the unusual tone of voice, the extraordinary dress, the leering unsightly eyes, the wide mouth, the nasty hair, and sallow shrivelled skin —'the vellum of the pedigree they claim,'—all appear at first sight out of the order of Nature, and dispose a stranger to turn out of their way."

We learnt from this old creature that her husband and family had removed with their reindeer, the day previous, to another part of the mountain, about five miles distant, and that she had remained behind to take charge of some of the utensils which could not all be moved at once. This accidental meeting was certainly fortunate, as she was able to accompany us to the spot where they had taken up their new abode, and which, from its remote situation, we might in vain have hunted for. Even this position was, in my estimation, as dreary as it could well be—a barren hollow, scooped out of the side of a mountain, and shut in by bogs all around;—but the spot to which she conducted us was many degrees worse. It was situated on the side of another bleak and naked mountain, on which the snow was everywhere lying in large masses, close to the miserable huts of the inhabitants, and at so great an elevation that, with a strong wind then blowing, and the rain descending in torrents, the cold was excessive; so very piercing that, in all my rambles, wet and weary as I now was, I never remember to have felt myself half so uncomfortable as on this visit to the Laps, whose hovels afforded but little protection against the storm that was raging, or the rain.

In the language of the Laplanders the hut is called *koja*. There were three or four of these wretched buildings at short distances from each other, all alike, but two only were at present inhabited. They are constructed of birchen poles

stuck in the ground in a circle of about six or eight feet in diameter,—not more than the latter,—with the ends brought to a point, so as to take a conical shape. The centre of the hut, or highest part under the apex, is not more than six feet. Grassy turf or sods are piled up outside the poles, and secured by a few branches of birch, which rest against them; and several large stones laid outside all around the bottom of the hut add to its support. The entrance is through an opening about three feet high, which, numbed with cold, I found it somewhat difficult to stoop under; but the Laplanders jumped in and out with the greatest facility. A reindeer's skin, hung loosely over the opening, serves every purpose of a door. In the centre of the hut burns the fire, and a little opening left at the top allows the smoke to escape. The heat inside, contrary to my expectation, was so oppressive, and the smell so overpowering, that I was compelled to decline taking my seat round the fire, to which I was strongly invited, as well by the occupants as by the bad state of the weather. These dwellings are so small that the owners are unable even to keep their provisions within them; but a sort of light platform or shelf of birch twigs, placed outside the hut and raised six or seven feet from the ground, is used as a kind of store-room for their milk and cheese, over which is placed a skin cover to preserve them from the weather. The old lady's husband had perched himself upon this to arrange his provender, and I

expected momentarily to see both him and it fall through the slender and tottering fabric.

I had the good fortune to arrive at the moment when the rein-deer were going out of a large fold inclosed with hurdles, into which they are driven in the morning to be milked. There could not have been less than some hundred and fifty in all, but the Laplanders either did not know or would not tell the number of deer they possessed. I understand that they invariably refuse to let the amount of their riches be known. The possessor of these I saw is considered the wealthiest of the neighbouring families, which gives him an importance in the eyes of the rest.

There are not many Lapland families established so far to the southward as this, and those few spread themselves widely, and are dispersed at the distance of five, ten, or fifteen miles from one another, to afford a greater extent of pasturage for their flocks of rein-deer; but in the winter they draw closer together. I noticed among these deer a very considerable difference in their size and shape, and in the magnitude of their fine branching horns: some were noble animals, and many of them carried most magnificent horns, little if at all inferior to those of the Wapiti.

The family I visited consisted of the chief, who called himself Nils Andersen, and said he was sixty-five years of age; his wife, who owned to sixty; their daughter, a girl of twenty, who, it appeared,

was married; her husband, and their little child. These, together with another Lap, whose relationship I could not discover, and two little girls who attended the rein-deer, made up the total of the family. One of these little girls, who, from her appearance, might be about thirteen years of age, said she was two-and-twenty. They were all, indeed, old and young, of a diminutive size, the tallest person appearing to me to be under five feet. When I find it stated, however, in print, that the average height of the men, by actual measurement, on this very same spot, was four feet, and that of the women not above three and a half, I perhaps ought to doubt my faculty of judging; and equally so my sense of hearing; for so far from finding the voice of the Laplander soft and effeminate, according with the softness of his language, as is stated by the same authority, it appeared to me to be precisely the reverse. Their language itself sounded harsh, and the pronunciation not unlike that of the Irish market-women one hears in Covent Garden; and they talked so loud and so rapidly, as to give to a stranger the idea of their quarrelling. Those I visited spoke the Norse language, as well as their own. One of the first questions that the old lady put to me, when I found her alone at her former habitation, was, whether I could give her a dram? Being prepared for an application of this kind, I had taken a bottle of brandy purposely for their use (and a little for my

own,) with which they were all greatly pleased; but I repented having been so lavish as to put them in possession of the bottle, when I observed the man coolly pouring out the whole contents into a bowl, with the obvious intention of finishing it at once: this the old man and woman would certainly have done between them, had I not insisted on their putting part of it back again, and giving the bottle to one of the little girls to put away. I thought it right to do so, in order to prevent their getting tipsy, though I do not know that this would have happened, as I found they are not unaccustomed to drink large quantities of spirits with impunity, whenever it falls in their way.

I can say nothing in favour of this specimen of the Laps now before me. If the rest be like them, they must be considered as a filthy, squalid people; they are, in fact,—

> "So wither'd, and so wild in their attire,"

that they

> —— "look not like the inhabitants of the earth,
> And yet are on't."

They set before me a great quantity of their reindeer cheese, but it was so nauseous to the palate that I could not bring myself to eat any part of it. It reminded me of the cheese which is in common use in Norway, made from goats' milk, but this was infinitely stronger, both as to smell and taste. They

make two sorts of it, one colourless, and the other of a yellowish tint; but whether it was owing to the quality of the milk, or coloured with some ingredient, I could not learn. Cheese, they told me, was literally the only solid food they had to live upon at this time; and judging from the manner in which I was thanked for a small quantity of dried beef, and a piece of gammel ost, the remnants of my stock of provisions, I could readily believe what they told me. My servant, who was himself addicted to chewing tobacco, gave some rolls of it to the Laplanders, who seemed delighted beyond measure at the acquisition of such an unlooked-for luxury.

The custom of shaking hands on receiving any benefit, as a token of their gratitude, appears to be observed by the Laplanders, in the same manner as among the Norwegians and Swedes.

Having fully satisfied my curiosity, and being thoroughly drenched with rain, I was not sorry to take my leave of these poor creatures; for, with all their apparent gaiety, occasioned no doubt by the visit of a stranger, and the exhilarating effects of a good dram of brandy, it was melancholy to reflect upon their apparently wretched state of existence; but it seemed to confirm what Dr. Johnson has said,—that existence is a blessing, under any circumstances: in point of fact, we are not competent to judge of what others feel, who are placed wholly under different circumstances from ourselves in

every stage of life. Here, at least, their excessive cheerfulness, and apparent content, seemed to contradict any idea of real suffering; for, during the whole period of my stay, one incessant noise of chattering and laughing was kept up among them. The daughter seemed an industrious girl: she was making herself a dress of rein-deer skin, and did not allow herself to be interrupted by our visit, but continued her work, occasionally looking up, talking, and joining in the laugh. How they get over the winter I can form no idea; the mountain on which they have fixed their abode for that season appears, by Forsell's map, to be 4080 feet high. The reason of their preference for these elevated situations is on account of their being most congenial with the nature and habits of their rein-deer, who are not only creatures of an arctic climate, but find here, in the greatest abundance, the moss that constitutes the chief article of their food—the *lichen rangiferinus*—and on the good condition of these animals the Laplanders must depend for their existence:—

> "Their rein-deer form their riches. These their tents,
> Their robes, their beds, and all their homely wealth
> Supply, their wholesome fare, and cheerful cups."

I now descended the mountain, and between three and four o'clock in the afternoon again reached Myhrmoe, after an absence of more than twelve hours, eleven of which were spent on horseback, mostly amidst heavy rain and mist. The

weather, however, had cleared up a little, while we were crossing Oresund lake, which did not occupy us long, to Bekosen. Our guide seemed a little apprehensive, whilst traversing the mountains, that we should not be able to cross the water, in consequence of the high wind, which he said generally made the lake so rough as to render boating unsafe: this may readily be imagined, more especially as its elevation is 2475 feet above the level of the sea, and it is surrounded by mountains. Fortunately, however, the wind lulled, and the water was tolerably smooth, otherwise our little boat, being crank and leaky, might have stood a fair chance of being swamped.

I had every reason to be pleased with the conduct of my guide; and as it appears that several of our countrymen make summer tours in Norway by way of variety, or of enjoying the excellent sport of fishing which it holds forth, and some of them may, probably, be induced hereafter to undertake a similar journey from Röraas to visit the Laplanders, I can safely recommend *Hanse Mortensen*, who resides on a little island on the Oresund lake, called *Tamnæs*, as a good man, and a safe guide, being perfectly well acquainted with the tracts across the neighbouring mountains. The landlady at Bekosen, as well as the one at Myhrmoe, are his sisters, both fine-looking women, he being also a remarkably well-made and handsome man, fully if not above

six feet high. One of his brothers, of equal stature, was employed at Bekosen; and he told me that he had also another brother of equal size, and five other sisters, all stout, well-grown women. Their parents were still living, the mother being seventy, and the father eighty years of age. I regretted much that I could not land at Tamnæs, without putting myself to some inconvenience, to have the pleasure of seeing together so fine a family; and the poor fellow was exceedingly anxious that I should do so, and that I should witness their comfortable dwelling, and the good condition of their farm, in which he seemed to take a pride: the number of their cattle he represented to be about the same as at Myhrmoe.

After a sound sleep and a hearty breakfast, of which some broiled fish, fresh from the lake, was not the least acceptable article, I mounted my horse, and retraced my steps towards Röraas, intending to take the copper-mines in my way thither. In about an hour I reached the largest mine, called the *Storvartz,* being in the brow of the mountain named *Storvold Grube,* at an elevation of 3068 feet above the sea. Here I dismounted, and having delivered a letter from the director of the mines to the foreman on the spot, I was immediately ushered into an apartment hung round with a variety of coarse clothes, out of which I was soon *suitably* equipped for a subterranean excursion. My dress consisted of a capacious jacket, in which

I was completely enveloped, a black cap, remarkable for the size of its horizontal brim and a bright tin ornament which glittered in the centre: a large pair of boots, stuffed full of straw, completed my costume for this occasion. The straw turned out to be indispensably necessary, for stuffed as they were with it, these large and ponderous boots were so inclined to lag behind in every muddy spot we had to cross, and which, in many parts of the mine, was ankle deep, that with the greatest exertion they could scarcely be prevailed upon to follow my legs. I was also accommodated with a walking-stick, spiked at the end, as a support to prevent me from falling, in passing some of the narrow and slippery places; and, finally, with my trowsers well tucked up towards the knee, I sallied forth into the bowels of the earth, escorted by the foreman of the mine, a couple of link-bearers, and my servant, whose personal appearance, on the present occasion, so much resembled my own, that we gazed at one another "veluti in speculum."

The entrance into the mine is by an adit of long and easy descent from the external orifice; so gradual, indeed, that carts are driven up and down to and from the farthest extremity, which is said to be not less than 450 Norsk fathoms from the entrance, or 2800 English feet nearly*. The

* The Norsk fathom is six feet, and the Norsk foot is rather more than the English—that is to say, 97 feet Norsk are about equal to 100 English.

greatest breadth in any one part is 190 fathoms, or about 1170 feet: the height of the passage is seldom less than six or eight feet, and frequently twelve or fifteen; and the depth of earth to daylight, at the extremity of the mine, is stated to be forty-three fathoms, or upwards of 260 feet. At a short distance from hence is the largest shaft, to which the ore is conveyed in carts from the spot where it is blasted, and hoisted up in barrels to the surface, by means of a large water-wheel of thirty-six feet in diameter. The reason for making use of shafts to hoist up the ore, instead of carrying it out at the entrance, is to shorten the distance and gain time. There are three of these shafts and wheels above ground, of equal dimensions, at short distances from each other; the water that turns them is led on by means of wooden aqueducts of rude construction. In addition to the three sheds in which the wheels are worked, there is a building where the ore is broken down into small fragments by large wooden tilt-hammers lifted by cog-wheels, and cleared from parts of the matrix adhering to it: there are nine of these hammers. The ore is the sulphuret of copper, very ponderous and massive; the matrix, chlorite slate, in which are imbedded multitudes of garnet crystals, most of them, however, imperfect and, the foreman told me, incapable of taking a polish, the correctness of which I proved in London. I also procured some beautiful specimens of *amianthus*, or asbestos,

of a clear shining whiteness, resembling fibres of the finest silk.

In the building above alluded to there are also a few troughs in which the fragments of the ore are washed clean. It is then sent to Röraas, where it is piled in heaps and submitted to the process of burning or roasting, in order to drive off the sulphur which abounds in the ore; and the heaps are usually covered with the smallest fragments of the ore, to keep in the heat and prevent the flames from bursting out, which indeed they would hardly do, as very little wood is necessary, and the sulphur smothers away as it burns. When sufficiently roasted and the sulphur expelled, it is then passed into the smelting-furnaces, and the metal run out into circular cakes, in which form it is transported, first to Tronyem, and from thence sent to Sweden and to Holland, and of late years to Italy. No other works, except the breaking and washing of the ore, the latter principally done by boys, are performed at the mines above-ground. The busy process is below; that of blasting was the same as it is everywhere else; the noise produced reminded me of a loud clap of thunder, particularly so as it gradually became fainter and fainter, till it died away

> "——— like the cloudy groan
> Of dying thunder on the distant wind."

So violent was the concussion of the air, that its vibration on the ear made it seem as if the mountain itself actually shook. On entering the mine

we were preceded by men carrying torches, made of bundles of deal splinters, to give light to the cavernous passages. This was the more necessary, as these subterranean streets branched out in every direction, reminding me strongly of the labyrinth of passages in the catacombs at Paris, which I once took an opportunity of visiting, but which are now no longer open to the public, in consequence, it was said, of the repeated accidents which occurred of people losing themselves.

The foreman showed me a map or plan on which the mine had been worked, and which resembled the streets of a town; the lines are mostly on the same level, owing to the veins of the ore being found to run nearly horizontal, with very little dip. These different streets or chambers bear the names of the different parties to whom the concern belongs, the produce of the mine being divided among a company of shareholders, and the total number of shares being about seventy. One of the caverns, in compliment to the King of Sweden, is called Carl Jean, and another bears the title of Oscar, two names given in commemoration of these two royal personages having visited the mine in the year 1818. On this occasion, it seems, a great part of the mine was splendidly illuminated with variegated lamps, and a military band stationed to play in some part of the interior. At a short distance from the entrance of the adit there was a small hole through the roof to the surface, which not only admitted

daylight but snow also,—a large mass of which was lying directly under it, upon which the light shining dimly produced a very singular appearance from a distance, amidst the utter darkness that prevailed around it.

The Storvartz mine is said to have been worked for a period of more than one hundred and twenty years, and the two others, between Röraas and Ejda, about seventy years; but the oldest mine in Norway is, I believe, the celebrated silver-mine, which has been worked upwards of two hundred years. The number of workmen permanently employed in the whole establishment at Storvartz, Röraas, and Ejda, was stated to be between four and five hundred, but during the summer months they give employment also to two or three hundred boys in addition. The following abstract of the monthly pay, showing the rate of wages of the workmen, was given to me by the foreman of the mine, under whose charge the accounts are placed. It proves how high the value of money is, and how low must be the price of provisions and the necessaries of life.

A miner, regularly employed in blasting the ore, earns in a month from 5 to 6 dollars, or about 1*l.* sterling.

A labourer, variously employed, earns from 3 to 4½ dollars per month.

A labourer employed in clearing the ore from the matrix, from 4 to 5 dollars per month.

A boy, above a certain age, employed in washing the ore, 2 dollars per month.

A boy under the specified age 8 orts 8 skillings per month.
The average monthly expense of the different articles used in working the mine (chiefly powder) is stated to be 300 dollars, or 60*l.*

For some time past this mining concern scarcely repaid the expenses of working; but I understand it is now doing very well for the shareholders, the profits arising from it being very considerable. It is evident that the town of Röraas is entirely supported by the working of the copper-mines in the neighbourhood.

There is reason to believe that copper exists in abundance in various parts of these Swedish Alps, as they are sometimes called, far to the northward of the Röraas mine. One, indeed, has for some years been successfully worked by a company of Englishmen, who call themselves "The Alten Mining Association." It is situated in or on the borders of Finmark, in Norway, close upon the 70th parallel of latitude, at the bottom of the Alten fiord. The produce of these mines is shipped close to the shore where they are worked, and carried to Swansea, to be there smelted, being first crushed and dressed on the spot. Every convenience is made for this purpose—wharfs, warehouses, rail-roads, and water-courses. The climate is, of course, cold, but healthy, and the native workmen are tractable, industrious, and laborious. At first the unfavourable climate and the remote situation occasioned some difficulty in procuring miners; but in a few years, when the concern was known to be flourish-

ing, a sufficient mining population came to the spot, the wages of labour fell considerably, and Alten now wears the appearance of a town. The Association not only derives a profit from the produce of the mines, but the same ships which convey the ore to Swansea, carry back provisions and comforts to dispose of to the inhabitants.

The ore is generally of the same nature as that of Röraas, the veins not rich, but numerous and powerful, and new lodes are constantly discovered, to which shafts and adits are conveniently driven and sunk in the sides of the low hills, that rise immediately from the shore of the fiord. The lode of the yellow copper pyrites is disseminated through a matrix of a compact green stone, occasionally bordering on chlorite slate. The average produce is stated to be from 10 to 12 per cent.; but some of the lodes yield from 15 to 17 per cent.

What an extraordinary people our countrymen are! In one of the most desolate and inhospitable regions of the globe, in the 70th parallel of latitude, buried for at least five months in ice and snow, to spend at once a large capital on a doubtful speculation, which, however, it seems has fortunately succeeded! Whither will they go next?

——— Quid non mortalia pectora cogis,
Auri sacra fames!

Having satisfied my curiosity with regard to the Storvartz mine, I proceeded on towards Röraas, where I arrived in the afternoon, highly gratified

with my little excursion, in spite of the almost continued rain. I lost no time in despatching a forebud to order horses to Tronyem, intending to retrace my steps the following day, being exceedingly anxious not to be the cause of any detention in the sailing of the yacht for Iceland.

On the morning of the 4th of July I left Röraas, and in the evening got as far as *Bogen*, where I passed the night. The weather still continued very wet; but thanks to Mr. M'Intosh, the ingenious inventor of the India-rubber water-proof cloaks, I suffered little or no inconvenience from it; it completely resisted and was impervious to the rain, long as I was exposed to it, and heavy as it fell; and after such a trial, it may bid defiance to the worst of our English weather.

I was here treated with some veal for dinner, or rather supper—a kind of meat not commonly met with in Norway—and some very good gammel ost; cream and butter of course, some good coffee, and *flat-brod*, with which the poorest peasantry contrive to treat their friends, being easily made and said to be cheaper than rye-bread. Should they happen to be too poor to keep a stock of flour by them, they can always purchase it of some neighbouring farmer. The higher classes rarely miss having flat-brod at their tables, which is used at meals in preference to bread baked in the oven.

In the *Livre des Etrangers*, at Bogen, while amusing myself by turning over the leaves, and

reading the names of those who had travelled this road, I observed a complaint entered by one of our countrymen, Mr. Treherne Thomas (whose brother I have the pleasure of being very well acquainted with), of a vicious horse having been harnessed to his carriole, which not only kicked over the shafts, but more than once very nearly upset the carriage over a precipice into the river. This gentleman had driven himself in a carriole some thousand miles, both in Sweden and Norway, and remarks that this was the only vicious horse that he had ever met with, during the whole of his extensive travels; and he deemed it right, very properly, to place it on record, as a caution to those who supply horses, and for the benefit of future travellers.

The covering of the bed in which I slept at the post-house consisted of sheep-skins, lined with various-coloured worsted, neatly worked by the women of the house. The counterpanes, indeed, of all the beds I have slept in, along this line of road, are made of the skins of animals, sometimes of wolves, but generally of sheep, and are usually lined in this manner. Those of the rein-deer are the most beautiful, but they are expensive.

Having obtained a good horse early the following morning, I drove on my journey, and on arriving at the post-house at Rogstad, again fell in with Captain Greene and Mr. Breton, the two gentlemen I have already mentioned, the former of whom was still enjoying the amusement of angling for

salmon in the Guul river. I am not surprised at this: there is not perhaps in the world finer fishing nor cheaper living than in Norway; and the lover of nature will no where find more diversified scenery of magnificent and picturesque mountains, luxuriant valleys, expansive lakes, and rivers clear as crystal, and all these intermingled with stately forests of pines and birch, cascades, waterfalls, and torrents. From these gentlemen, who had just returned from Tronyem, I received the unwelcome intelligence that the "Flower of Yarrow" could not possibly be ready for sea for ten days to come; and, as they were professional men, no doubt could be entertained of the accuracy of the information. I began therefore to revolve the matter in my mind, as the summer was so far advanced, whether it might not be expedient to give up altogether my projected visit to Iceland this year, and to proceed at once down the valley of the Glommen to Christiania, and from thence to Stockholm, making a tour along the western shores of the Gulf of Bothnia, as far as Tornea; but after mature deliberation I could not make up my mind to throw away so favourable an opportunity, which might never recur, of seeing what may justly be considered the most extraordinary as well as the most interesting country on the face of the globe; nor on any consideration thus to part from my most agreeable companions, setting aside the no very pleasing prospect of undertaking a long solitary journey,

which the Swedish one would have been, without a soul to share its pleasures or its inconveniences.

On this last day of the journey, I felt very much annoyed at what could not be helped—the horrible bad state of the road. The late rains and the numerous carts had so completely cut it up in every direction, and made it so full of deep ruts, that I found it utterly impossible to escape, or to *quarter*, as it is commonly called, but was obliged to allow the horse to pick its own way, and to drag the little carriole over the ridges of the ruts and through the mire, while I was jumbled, jolted, and fatigued, beyond what I had before experienced in the worst parts of Norway. Added to this was the annoyance of constantly meeting the carts of the peasantry on their return from the fair which had just been held at Tronyem: these clumsy vehicles, in attempting to quarter, would sometimes stick fast in the mud, while the drivers of the carts and the carriole were grinning and scolding at each other. Others again, like Giles Jolt, were quietly sleeping in their carts, regardless of what might happen to themselves or their horses; and others loitering behind at a considerable distance, leaving the vehicles to the discretion of their horses. In some places I found these little caravans halting by the road-side, the horses taken out of the carts and turned loose to feed: on such occasions care is taken to prevent their straying away by placing shackles on their legs.

The drivers, during a halt of this kind, are always to be seen stretched at full length on the ground, and I have even seen them, when it has been raining incessantly, lying on the wet grass, covered with nothing but a cloak, sometimes with a little fire burning at their feet, just as we see the gipsies in their encampments.

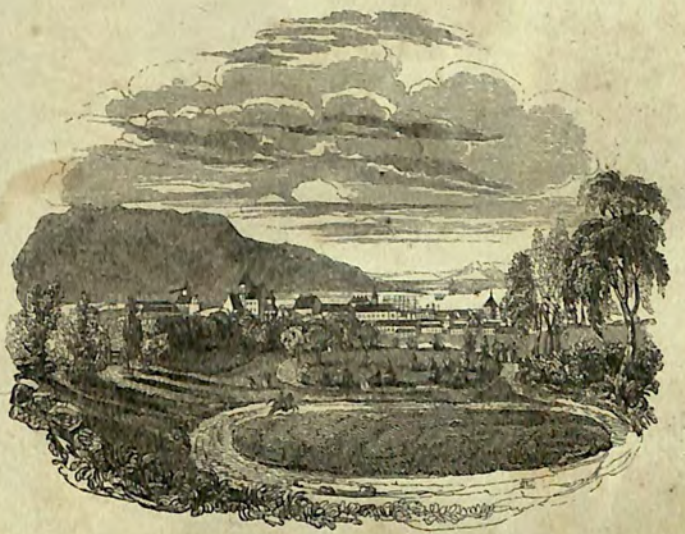
After my long day's journey, which I will not call unpleasant, notwithstanding the miserable state of the roads, I arrived at Tronyem in the evening, and took up my abode at Madame Holmberg's comfortable house, intending to remain there until the "Flower of Yarrow" should be ready for sea.

CHAPTER III.

VOYAGE FROM TRONYEM TO ICELAND.

Family at *Lille Gaarden*—English at Tronyem—An unfortunate Pole—Falls of Lierfossen — Salmon Fishery — Cathedral of Tronyem, Sketch of—Departure from Tronyem by a Southern Fiord — Town and Harbour of Christiansund — Population—Grib Islands—Departure—Foggy weather—Dangerous Errors in Arrowsmith's Chart of Iceland—The Danish Survey correct —Coast of Iceland seen—Ingolf's and Flokkoe's Expeditions—Superstitions regarding the raven not confined to the Icelanders —Compelled to stand off the Coast—Dense Fog—Pass Cape Reikanæs — Sunken Volcanic Island — Despair of finding Reikiavik—Strike on a Volcanic Rock—Difficulty of getting a Pilot in Faxé-bugten, or Bay—Anchor opposite the Town of Reikiavik.

IMMEDIATELY on my return to Tronyem, I proceeded up to *Lille Gaarden* (the little garden), a neat country-house belonging to Mr. Johansen, the brother-in-law of Mr. Broder Knudtzon, with whom the latter is an inmate, situated about a mile from the town. I was anxious to ascertain from Mr. Smith, who was on a visit there, what progress had been made in the repairs and equipment of the yacht. From him I learned, with regret, that in consequence of the badness of the weather, which had been as unfavourable to the caulkers as to myself, and the slowness of the other artificers, added to their being obliged to send boats to and from the dock-yard, a distance not far short of a mile, to obtain every little article that was re-



TRONYEM FROM LILLEGAARDEN.

quired, there was not much chance of our getting away from Tronyem for several days.

As I could take no active part in directing or superintending the repairs of the vessel, my only resource was to stroll about the streets of the town and the immediate vicinity, and occasionally to amuse myself by taking a few sketches, chiefly with the view to kill time, which otherwise would have hung heavily on my hands in a place like this, where I had resided long enough to see every thing but a year before. To Mr. Johanson and his amiable lady I felt myself under the greatest obligation for the very kind attention shown to me during my stay at Tronyem. Lille Gaarden was, in fact, my home; and I shall often think with pleasure on the many happy hours passed in the agreeable society of this excellent family, and their friends who used to associate at their pleasant little villa. The situation is delightful: it stands on the same piece of rising ground on which the Fortress of Christiansund is built, and commands a fine view of the city, as well as of the beautiful fiord, and the mountains beyond it. The annexed sketch was taken from the grass-plat immediately in front of the house, and will serve to convey some idea of the beautiful and diversified prospect from this social retreat.

I was not so fortunate as to find here any of those excellent strawberries and cherries, which, contrary to expectation, in the latitude of 63°, De Capell Brooke tasted quite ripe early in July; but I

observed both thriving in the garden, now about the same period of the year, but neither of them nearly ripe. Peas and beans and the common culinary vegetables were growing in the kitchen-garden, in which were apple-trees that appeared to be bearing well, but everything was in a backward state. In 1815, Mr. Johansen planted a great number of different kinds of flowering trees and shrubs which he had procured from Scotland; many of these had thriven pretty well, particularly the laburnums, which were now full of blossom, and not inferior in colour and size to any that may be seen in England during the spring. Two oaks and a solitary beech were evidently out of their element, and neither of them likely ever to arrive at the dignity of a tree; ash-trees, birches, and alders were the most thriving, and the number of starlings that had built their nests among them was quite incredible. When scared by any sudden alarm, they rose in such multitudes, that the whole atmosphere around seemed to be darkened.

During my stay at Tronyem, at the house of Madame Holmberg where I lodged, I met with three English gentlemen, who had arrived there from Bergen. They were the only English travellers who had reached Tronyem this summer, though I have since been informed that several visited various parts of Norway in the course of the year, and that many returned on finding that the cholera had reached Christiania. One of the above-mentioned gentlemen, who was travelling alone, had crossed

a few of those numerous fiords on which I had embarked the preceding summer. The other two had come in a Norwegian vessel, coastwise, which they had hired at Bergen; and one of these, an officer in our cavalry, was recognised by me to be Mr. Dann, an old school-fellow at the Charter-house, whom I had not had the pleasure of seeing since I left—now ten years ago. I learnt from him that the passage of the Fille fi-eld, between Christiania and Bergen, which I had crossed last summer, was now enveloped in snow, and that it was not without some difficulty he had contrived to reach Bergen; and that one or two travellers, less venturous than himself, had given up the journey over these mountains.

A Polish colonel, a tall handsome man, was also a lodger at Madame Holmberg's; he had been in the command of a regiment of cavalry during the late wars, and had received a severe wound in the thigh, which caused him to walk quite lame. He complained to me that he was very unhappy—that he had now no home to go to, and had been induced to take a journey to Tronyem, for the purpose of using the baths, from which he had been told he would find benefit, in relieving the sufferings he experienced from his wound, which he had happily done; but he complained sadly of the enormous expense of the baths. They are similar, in most respects, to those well-known vapour-baths of Russia, and the same scrubbing process is made use of; but as this gentleman was a

Pole, Russia was no country for one of that unfortunate nation to have recourse to. There, it is probable, his sufferings would either have been aggravated, or soon found an end. This poor officer appeared, indeed, to be almost broken-hearted at the sad reverse of fortune, and it was impossible not to feel deeply for his unhappy and forlorn situation. Too truly might he say—

> "Sad is my fate, (cried the heart-broken stranger,)
> The wild-deer and wolf to a covert can flee;
> But I have no refuge from famine or danger,
> A home or a country remain not for me."

During our stay at Tronyem, I took an opportunity of paying another visit, in company with Mr. Smith, to the beautiful Falls of *Lierfossen*, on the river *Nid*. As it was earlier in the year than when I last visited them, the body of water, from the melting of the snow in the neighbouring mountains, was far greater than before, and consequently more imposing—the splendour and magnificence of effect in waterfalls, both on the eye and the ear, depending more on the mass, than the height, of the volume of water. We dined with Mr. Oveson, the proprietor of the neighbouring estates, and in the evening went in a boat near the foot of the Falls to enjoy the amusement of angling for salmon. My friend insisted on my trying my luck with one of his rods, which I wished to decline on the score of ignorance and awkwardness; but remonstrance was in vain, so for the first time in my life I found myself in the character of an angler, with

rod and reel in my hand. During our short stay I hooked two salmon, but landed neither of them—one having broken the line and darted off with it and the fly, while the other was satisfied with the fly and a small part of the hook. I could have wished that good fortune had allowed me to land one of them, but, as it was not in the fates, all I could do was to console myself, on being told that it was no unusual occurrence, and that it might and sometimes did happen even to the most expert disciple of Izaak Walton to lose his fish.

Having passed a very agreeable evening, we returned to our lodgings at Tronyem. Mr. Knudtzon had lent us his horse to drive thither in the carriole: it was one of those remarkably fast trotters which are frequently met with in different parts of Norway; and as he was on the point of leaving the country for some little time, the horse in question was to be disposed of; and I much regretted the almost impossibility of getting the animal safe over to England, and the great expense which would necessarily attend it, otherwise I should have purchased him for ten pounds!—the price fixed upon for this beautiful and valuable animal, which would not be had in London for thirty or forty.

I was glad to observe that the exterior of the fine old cathedral at Tronyem was undergoing very extensive repairs; and that the original architectural ornaments, many of which were almost and some

entirely obliterated, were now undergoing restoration. A great part was already finished, and reflected much credit on the native workmen employed upon it. The interior was also under repair, which made it necessary that divine service, for a time, should be discontinued. It is still considerably the finest building in Norway—I believe I may say in the north of Europe, if Russia be excepted. It was built in the tenth or eleventh century, and the architecture is a mixture of Saxon and Gothic, both, however, greatly injured and defaced by modern repairs. It was once the principal resort of pilgrims in the north. The annexed print is from a sketch I took from a point of view recommended to me as the best by Mr. Knudtzon; and on looking at De Capell Brooke's print on my return, I see that we must both have sketched it from very nearly the same spot.

The caulking of the yacht, and other repairs, owing to the badness of the weather which still continued, and I suspect also the inexpertness of the artificers, went on slowly enough, so that it was not until the 16th of July that we were enabled to get under weigh for Iceland. Happily we did so at length in the afternoon of that day, with the wind however nearly a-head, and consequently we made but little progress; but on the following day it shifted about a point in our favour. We were advised to proceed to the coast down a different fiord from that we had come up, and instead of pro-

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CATHEDRAL OF TRONYEM.

ceeding northerly, and taking the northern or Froy fiord, as soon as we should have passed the lofty promontory of Walsetholm, which is on the continent of Norway, to direct our course to the south-west, keeping the continent on our left, and the large island of Hitteren on our right. By continuing on this course, which would take us with little change to the sea, we should derive the advantage of being a full degree of longitude more to the westward than the entrance of the Froy fiord, and give us therefore a better offing from the coast. Towards the lower end of this passage we had the large island of Smolen on the right, and the high mountain of Tusteren on the left, the latter being on the island of that name, and the same that we observed in our passage up to be wrapped in snow, and whose summit was still so.

Having rounded the island of Tusteren to the westward, amid whole shoals of formidable-looking rocks, we stood southerly into a snug well-sheltered anchorage, in the centre of three small islands, on each of which we observed a little town or village, and before that which appeared to be of the greatest extent were lying some ten or twelve small square-rigged vessels. This was the harbour of *Christiansund*, which we entered on the morning of the 18th. In going down the present fiord, which bears the name of *Tronyem's Leed*, we observed the mountainous islands on either side to consist chiefly of naked rock, with here and there a few fir-trees in the cre-

vices, or near to the shore. The mountains on Tusteren and the neighbouring islands, and others still more southerly, which had attracted our attention in going up the northern passage, by being covered with snow, were now seen to rise majestically out of the fiord, their summits mostly being enveloped in the clouds. The distance of Tronyem from the entrance of the Froy fiord is about seventy, and that of the Tronyem fiord about ninety miles.

Just as we were entering the harbour of Christiansund the wind had become fair, and it was blowing so strong from the mountains, that we ran in without a stitch of canvass set. It very soon, however, got back to its old quarter, so we remained quietly at anchor till the following morning.

The harbour of Christiansund contains a sufficient depth of water to admit vessels of large tonnage to lay close to the mercantile warehouses, which, like those of Tronyem, are built on piles, and carried into the harbour. Some of the storehouses, for greater convenience, are erected on small rocks which appear a little above the surface of the water. There is no street in any of those clusters of houses which compose Christiansund: they are built chiefly along the edge of the water. Each mercantile resident has his own private boat, in which he rows from one part of the town to the other, to pay his visits or transact business. On the top of one of the islands is erected a small

look-out house, and two little guns are placed there to be used as signals, to give notice to the pilots of the approach of vessels towards the entrance of the fiord. A walk to the summit of this island is the favourite and indeed the only promenade of the inhabitants.

The names of the three islands are *Kirkelandet, Inlandet,* and *Nordlandet*, the last of which is the largest; but the principal part of this divided town, and that which contains the best houses, is built on *Kirkelandet,* so called from its containing the parochial church. The population of the three towns of Christiansund was stated to be about two thousand. The trade is now almost solely confined to that of fish: fir timber, once an article largely exported, being now very little in demand since the heavy duty laid upon it in England, which appears to have been a severe blow to the commerce of Norway, and is complained of in every sea-port,—the only ground of complaint I ever met with from any of the Norwegians against England. We waited upon Mr. Knudtzon, a relation of our friend and now our companion of that name on board the yacht, and from him received every possible attention.

Our first care while we remained here was to complete our water, and the next, to purchase what might be required for our voyage to Iceland; and among other things, a sheep or two, which we were told we could only be permitted to do on the understanding that the skins were to be returned;

but as we intended to kill the animals on the passage, when the fresh meat we had on board was exhausted, we were allowed, as a great indulgence, to purchase *one* of these animals. There was here, however, no risk of wanting fresh meat. A boat came alongside with a quantity of the flesh of red-deer for sale; but as there was nothing tempting in its appearance, and being already, with the addition of our sheep, well supplied with fresh meat, we declined purchasing any of this species of game. The red-deer are said to abound so much on the mountainous parts of Tusteren, and the other high mountainous islands on this part of the coast, that the inhabitants feel thankful when any one will take the trouble to shoot them, as they interfere very much with the feeding of the sheep.

On the morning of the 19th, the wind being fair, all the vessels began to loosen their sails ready for a start, and got under weigh about six o'clock. The greater part were Spanish, some of which had been there nearly two months waiting for a wind. A Spanish brig, that had left Tronyem nine days before us, we observed in our way down, lying quietly at anchor in one of the little snug bays of the fiord. It was eleven o'clock before we got our pilot on board, when we also weighed anchor. The passage out is short, and lies close to the *Grib öerne* group of islands, beset with numberless rocks. This group lies directly in the centre of the entrance into the fiord. The largest

of the group, although not exceeding, I believe, 300 yards in length, and about 200 in breadth, is said to be peopled by some two or three hundred inhabitants, mostly fishermen; and its little church forms a remarkable object in the midst of these rocky islets. I cannot imagine that there exists in the world a coast so remarkably beset with myriads of rocks as that of Norway. It would seem as if the whole of that alpine range which fronts the Western Ocean, and runs nearly in a north and south direction through the country, had been convulsed and torn asunder, and its fragments carried by the numerous fiords into the sea, some of them rising above the surface, and others beneath it. One can scarcely conceive it possible that any vessel attempting to enter one of these fiords could escape being wrecked, unless she was furnished with a skilful pilot, and even then they must be wholly inaccessible in tempestuous weather.

The property of the Grib Islands belongs to a Mr. Moses, one of the principal merchants of Christiansund, and it is considered to be highly valuable on account of the fishing, which is here carried on to a great extent. It consists chiefly of lobsters, cod, and ling, as well as the other species of fish usually caught on the coast of Norway. Mr. Moses, and two other gentlemen residing at Christiansund, accompanied us out to sea as far as this cluster of islands, and returned with the pilot. As the pilot-boat pushed off from us they stood up,

and with three hearty cheers expressed their wishes for a prosperous voyage.

It will not, perhaps, be considered as any great feat for a yacht to beat a Spanish merchant-ship; I may, however, mention, that although the Spaniards from Christiansund had no less than five hours' start of us, with a fine fresh breeze, standing on the same course with us, we soon passed them, and had the satisfaction of running them all *hull down* before sunset.

This part of the coast of Norway, as we receded from it, presented a most imposing appearance. As far as the eye could reach to the southward, a continued chain of magnificent mountains of every variety of form filled the eastern horizon, their summits, down to the line of the sea, completely enveloped in one uniform mass of snow, which terminated to the northward with the snowy peak of Tusteren, this island apparently standing prominently forward, as the coast-line begins here to trend easterly in advancing to the northward.

The monotony of a sea voyage was broken towards the evening by falling in with a group of four or five large black whales, at no great distance from us, one of which thought fit to salute us with a *jet d'eau*, thrown up to a prodigious height, before he plunged down head-foremost, exhibiting his moon-shaped tail in the air. The whale appears to be a fine-weather fish, as it is said to be rarely seen playing its gambols except in a calm,

or in fine clear weather. On this evening and the following morning nothing could be more beautiful—not a cloud was to be seen in the sky, and we had just a sufficient breeze to waft the vessel onwards some seven or eight knots an hour. It was precisely the kind of weather in which a landsman can most enjoy himself at sea, if it be possible for him to receive any enjoyment, which, for my own part, I am inclined to doubt, believing that none but a seaman can find any real pleasure on a long voyage. It is then—

> "When no object meets the admiring eye,
> Save the blue water, and the bluer sky,
> Moved by the joyous freshness of the scene,
> The heart turns back to pleasures which have been;
> To happier hours and calmer thoughts descends,
> To lost companions, and to absent friends."

The clear day, and the moderate breeze of fair wind, were of short continuance, as towards the evening the weather thickened, the wind began to head us, we were close hauled, and the breeze freshened at night. We had been led to expect fogs as we approached the coast of Iceland, but we were not prepared to find them in the middle of summer as bad or worse than we often witness them in England in the depth of winter. For the two succeeding days, however, we were not only becalmed, with a heavy sea tossing the vessel about, but on the first of these days the fog was so very dense, that we could see nothing beyond the head of the

vessel, and scarcely that. According to our calculation, we were now abreast of the Ferroe Islands, but considerably to the northward of them. Towards the evening of the 23rd the rain fell heavily, and seemed to drive away the fog, or at least to clear it off a little.

On the 24th we were anxiously looking out for land. The wind was foul, and we stood towards the northward, in the hope of making some of the high land, which at times we thought we could get a glimpse of; but the atmosphere was still so far from being clear that we considered it doubtful. According to a Chart of Iceland, published by Arrowsmith in 1808, when compared with our reckoning, we had yet full fifty miles to run before we should fall in with the coast, on that parallel of latitude on which we were sailing; but, as laid down by a Danish survey of the coast, we were close upon it, and the question was, in the present state of the weather,—and a most important one to us,—whether to trust to the English or the Danish chart, or to neither, but be guided by our reckoning. Our mate, who had a tolerable good observation, put the most implicit confidence in the chronometer, and amused us by observing, that the charts might very possibly be both wrong, but that it was utterly impossible for his chronometer to be wrong, which had served us so well hitherto; and as it accorded very nearly with the Danish chart, we resolved to lay aside Arrowsmith's altogether,

as tending only to mislead, and to go by the Danish one*, and the chronometer.

The result was, that we soon proved the accuracy of the Danish chart by its perfect agreement with our mate's chronometer; for on the 25th we found ourselves close upon the point of land steered for—much closer, indeed, than we had any desire to be. By our latitude and the chronometer, we could have no doubt that it was the south-eastern point of *Ingolf's Hoofde*, the very spot where it is supposed that worthy adventurer, in the ninth century, first made the land, and where, according to the religious or superstitious notions of those days, he threw his door-posts, the usual *penates*, which he had carried with him from Norway, into the sea, in order that by watching where they would first reach the shore, he should be able to discover the fortunate spot where his destiny called upon him to fix his future abode. He, however, soon parted from his floating household gods, and landed at the point which bears his name; while, as was discovered some time after, by one of his people in

* The longitude of the eastern extremity of Iceland—

By Arrowsmith is	16° 0′	w.
By Danish survey	13 30	w.
Error	2 30,	or 67 miles,

a most dangerous error to ships making it from the eastward. The Danish chart, though on a small scale, was most likely to be correct, having been laid down by professional men, and published so late as the year 1826.

quest of a more favoured spot to settle, they had been drifted to the *Bay of Reikiavik;* and here, conformable with his vow, he fixed the first settlement of the island." These said door-posts were more lucky than we were in their voyage from Ingolf's Hoofde, for it was with the utmost difficulty, with all the advantage of a good chart, which, as I have said, the Danish chart proved to be, that we discovered the little harbour of Reikiavik. It may be observed, however, that this town has very recently become the capital of Iceland, and that the ancient capital was Skalholt. In a Danish map of Iceland, just one century old, the name of Reikiavik does not appear.

Ingolf, however, was not the first, by many, who had landed on Iceland: among others, one Flokké, or Flokkoe, had preceded him. This adventurer, in departing from Ferroe Islands on discovery to the northward, took with him three or four ravens, which, by their flight, might direct his course over the wide ocean towards some land. Having sailed to a certain distance, he set off one of his birds, which flew away back towards Ferroe; farther on he set off another which, like the raven of Noah, 'went forth to and fro,' and then perched on the ship. A third was despatched, which took its flight to the northward, and returned not again. This story bears so striking a resemblance to the history of Noah's raven, that unless it was a common practice in ancient times (and it was a natural re-

source enough) before the directive power of the *liederstein*, or leading-stone (whence our loadstone) was known, one cannot but strongly suspect that some Christian historian must have borrowed it, as Flokké and his companions were Pagans, and so were their countrymen, for two centuries after this supposed transaction, and consequently had no knowledge of the Bible: however, it is a pretty story, and one which the Icelanders generally are willing to receive as authentic, like many others of the marvellous kind contained in their *Sagas*.

It is possible, however, that some little superstitious feeling may have attached itself to the choice of ravens. This bird was dedicated to Odin, who, as the traditional history of Iceland informs us, had two ravens, which were let loose every morning to collect intelligence of what was going on in the world, and which, on returning in the evening, perched upon Odin's shoulders, to whisper in his ear whatever information they might have collected: the name of the one was *Hugin*, or Spirit—of the other, *Mumin*, or Memory. The raven besides held its place for a long time as the central decoration in the Royal Danish Standard; and even now, as we learn from Olafsen and Povelsen, the Icelanders entertain superstitious notions regarding the raven—that they believe this bird to be not only acquainted with what is going on at a distance, but also what is to happen in future—that it foretells when any of a family is about to die,

by perching on the roof of the house, or wheeling round in the air with a continual cry, varying its voice in a singular and melodious manner. All this may have descended from the days of Odin; but we too have our superstitions about this bird. King Henry VI. tells Gloster—

> "The owl shriek'd at thy birth, an evil sign."
>
> "Dogs howl'd, and hideous tempests shook down trees,
> The *raven* rook'd her on the chimney's top."

Othello says—

> ——— "O it comes o'er my memory,
> As doth the *raven* o'er the infected house,
> Boding to all."

And Lady Macbeth—

> ——— "The *raven* himself is hoarse
> That croaks the fatal entrance of Duncan
> Under my battlements."

The weather had now once more become fine, and we found a very perceptible difference in the climate—it was actually cold, and heavy showers of hail fell early in the morning; but as the atmosphere was pretty clear, we had a fine view of the *Orefa Jokul**, appearing as if it rose immediately out of the sea to an enormous height, and covered with snow nearly down to its visible base, which at this distance appeared to be the rocky

* Jokul signifies a mountain covered with snow, and is pronounced Yokul.

line of coast, whose rugged, black, and naked aspect bore a remarkable contrast with the clear white snow of the Yokul.

I have before observed that we were closer upon the land than we had any desire to be—we were, in fact, very nearly striking upon a rock just even with the water's edge, and, on putting the yacht about, the alarm was given that we were close upon a second rock; the latter, however, proved to be a huge whale, which soon disappeared. It might, notwithstanding, have proved of equally serious consequence as the rock, if the stories one has heard be true, had the vessel unfortunately struck it, for it has often been stated that the whale will attack vessels, and cause considerable damage to them. A great number of these large monsters were observed during the whole of this day. The sea on this part of the coast was unusually disturbed, and influenced apparently by the meeting of tides or currents from the two sides of the island, causing what the sailors call a rippling—in fact, the appearance, in some places, was that of breakers; but our light bark bounded like a cork over the wave. Thousands of gulls and of the whole tribe of sea-fowl were flying about in every direction. It was ludicrous enough to watch a particular species of brown gull chasing the large white ones, the former never allowing the latter to settle on the water, without immediately attacking, and putting them to flight.

The view of the towering snowy mountains of Iceland, of which we had just a glimpse, was exceedingly tantalizing, the wind compelling us to stand out to sea; but we kept our eyes fixed on them, until they were lost to the sight as we stood away from the land. It blew very hard the whole day, and we thought ourselves fortunate in escaping the fate of a trading vessel, laden with a cargo of salt, which we had seen her taking on board at Liverpool: she was driven on shore during the gale at *Grindevik*. This unfortunate trader had got so far to the westward as *Cape Reikianæs*, but could not double it; the crew were saved, but the cargo was lost: she was a Danish merchant brig. It seems, as we afterwards ascertained, that she was unable to work off the coast, and had, therefore, anchored in the small bay where she went ashore. We continued to stand away to the south-west, till we had got a sufficient offing, when we tacked and made for the land.

The sun set beautifully, and the moon rose equally so; the clearness of the atmosphere being very remarkable. We thought we saw the land at a great distance from it, and although we afterwards discovered that they were only clouds, it was difficult to undeceive ourselves of the idea of their being real rocks rising out of the water, some to an enormous height, and all continually varying in their shape; and yet our position on the chart ought to have satisfied us that there could not possibly

be any land near where we were. The deception was greater, from the circumstance of there being, as it were, *two* sets of clouds, one of which, apparently passing over the others, looked like the clouds skimming the summits of the hills.

On the 26th the wind still was foul and blowing fresh, and continued so during the night. As any little incident breaks the monotony of a voyage, we were amused to-day by a shoal of porpoises, which played for a considerable time about the bows of our vessel. The sailors endeavoured to harpoon some of them, but were not sufficiently expert. On the 27th we were enveloped the whole day in a thick fog, which prevented us from seeing a ship's length before us; but as we knew that we were still some distance from the land, and that there was not much fear of running foul of a vessel in these parts, not having seen a single sail since we parted company with the Spaniards, we made no hesitation in standing on our course till night, when as we thought we were now approaching the land, and the fog continuing, we deemed it prudent to lay-to. The distance we had run since tacking, the incredible number of birds, chiefly gannets, which were flying about, and the appearance of the water, satisfied us that we could not be far off; and although we were not apprehensive of danger, it was still no very pleasant situation to be placed in—bad enough on a coast well known, but still worse

on one of which we were entirely ignorant, and of which we had but one general chart, on a very small scale, to trust to,—so small as not to be of much use, even if we could have seen the land. It turned out that we did well in laying-to, for on the following morning, when the fog partially cleared away, we found ourselves inside of, and at no great distance from, a very remarkable rock, rising abruptly out of the sea to a great height on our left; and we thought we could make out the main land, which we afterwards saw more distinctly on our right. This we concluded to be the point of land called Cape Reikianæs, and accordingly sailed through the passage between it, and the rock near to us, which is named by the Icelanders the *Eld Ey El Mul Sækken*, or the Meal-Sack Fire-Island, having been, as tradition says, thrown up by volcanic fire. The following sketch shows its shape;

The Meal-sack and pinnacled Rock.

as also that of another remarkable rock, opposite to it, and a little detached from the shore, as, when

the fog occasionally dispersed, we were enabled to ascertain distinctly. The latter resembled a pinnacled church, and as we sailed through the passage it did not alter its appearance. There are several of these fire-islands, as they are called, which lie off this point of land, and one of which, the most distant, is called the *Blinde Fugle Skiær*, or concealed bird rock (*Skiær* being our *Scar*): it is very dangerous, from being just under water. This rock is said to have thrown out great quantities of ashes about three years ago, some of which fell in Reikiavik, and caused some alarm to the inhabitants. It was originally a submarine volcano, which burst forth out of the sea in 1783, about a month before the tremendous explosion of the Skaptar Yokul, the most destructive volcano known in modern times. The position of this dangerous rock is about forty miles south-west from Cape Reikianæs. On its first eruption the sea was said to be so thickly covered with pumice, that ships were impeded by it, and clouds of ashes fell over Reikiavik, and covered the ground for many miles round: within a few months it disappeared, and has left a rocky reef under water of different depths from five to twenty fathoms.

Having passed Cape Reikianæs, or the *Smoking Promontory*, we bore away to the northward, keeping at a distance from the shore, but sufficiently near to observe its dark and rugged character, being one continued mass of rock rising abruptly out of

the water, totally denuded of all verdure, shapeless, and disrupted, presenting to the navigator a most hideous appearance, and forming a great contrast to the beautiful mountains of snow which had first attracted our attention on approaching Iceland.

The number of birds that were everywhere flying about, or resting on the waves, was quite surprising. Gannets and puffins, guillemots and awks (*Alca*) were very abundant, and so was that lively little bird the tern, or sea-swallow. The two gulls named by the Dutch the mallmoke and the kittiwake, generally the most plentiful in the arctic seas, were here the least numerous.

We had hoped, as we approached *Skagen*, that we should have fallen in with a pilot; but it appears there were none stationed at this place, and that a vessel must run close to the entrance of the harbour of Reikiavik before she has a chance of procuring one. Skagen is the next point of land we had to round to get into the *Faxé Bugten*, or bay, improperly named in most of the charts Faxé *fiord*, which it is not, but an open bay, of at least fifty miles from Cape Skagen to Snæfelness. In fine weather the chances are that information may be obtained from fishing-boats respecting the approach to the capital of Iceland, which is so completely hidden by a projecting point of land as not to be visible from the bay. With a strong breeze, and comparatively smooth water, the wind

being fair, we ran on at a great rate till we found ourselves suddenly stopped by a long reef of rocks, some under water, stretching out from the foot of a high mountain, which we concluded to be *Akkre* fi-eld. We had evidently passed our port, and as the evening was getting late, and the days had already so far shortened that it became dusk for three or four hours during the night, and as there was little hope of our finding it before the morning, we had no alternative but to beat our way back. At day-break we ventured close in-shore, but could no where see a human habitation, or any signs of life. In every direction all was desolation—the black naked rocks that bounded the coast, and bounded also our view,—for nothing was visible beyond them,—were rent and torn, and heaped on each other in strange confusion.

We tried for one or two narrow openings, boldly —I might say rashly enough—as our small Danish chart warned us that there were numerous rocks under water. We had nearly paid dear for our temerity, and might have left the "Flower of Yarrow" to finish her career in the Faxé Bugten, for we ran her over a sunken rock, which had just water enough upon it to let her pass, not, however, without grazing her keel; and fortunately there was just wind enough to force her over it, without sustaining any damage. I have learnt, since my return, that the good people of Tronyem

prognosticated on our departure from thence, that the little taunt-masted yacht would never reach Iceland, or would leave her remains on some part of its rocky shores, which might, indeed, from our entire ignorance of them, have happened. Fate however ordained it otherwise.

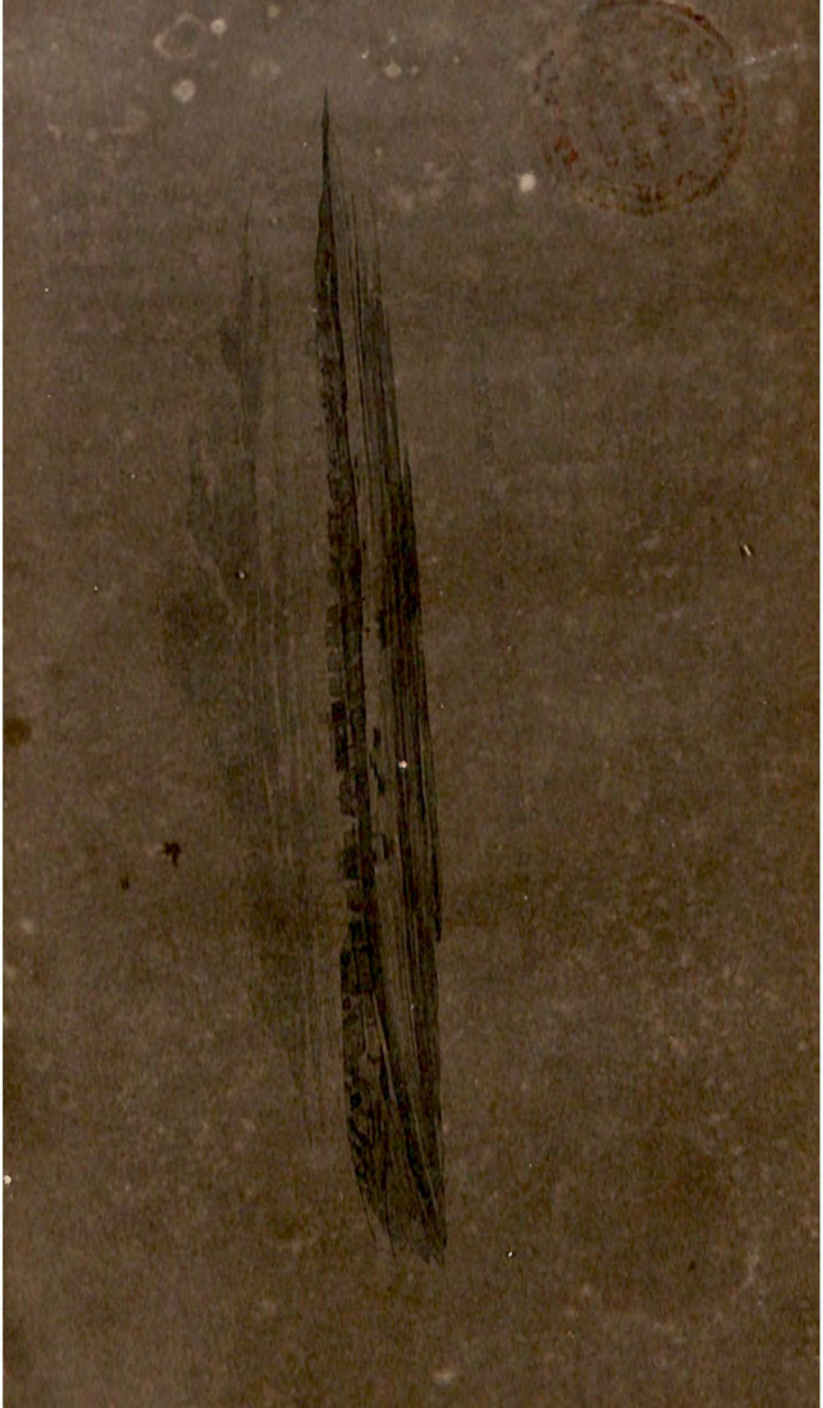
We had now got under a projecting coast still exhibiting black and naked rocks of strange, fantastic shapes, and being on our right, we were evidently standing into a fiord, of the further extremity of which we soon got sight, where there was every appearance of a harbour. As we approached a little nearer, we were able to discover, with the aid of a telescope, the masts of a vessel, and two or three houses. The sight of these was a great relief to our anxiety, but having once touched the ground, we were now extremely cautious in venturing too far into the passage, and therefore laid to, whilst Mr. Smith, accompanied by Mr. Knudtzon, proceeded in the cutter to endeavour to bring off a pilot, and to discover whether this was Reikiavik, and if not, where we should find it. It was blowing strong in the fiord, and there was a high sea running, notwithstanding our being very close under the land. We soon lost sight of our companions, who, before they had proceeded far, fell in with a pilot-boat that was coming off to the yacht. They managed, but not without considerable danger of swamping the cutter, to get the pilot out of his boat, and

brought him on board. It was so foggy, that we could see nothing of them until they came close alongside again. They were completely drenched with the waves, and had been obliged to keep constantly baling out the boat for upwards of an hour, being the whole time they were absent, to prevent her from filling. As may be supposed, we who remained on board were not a little rejoiced at their safe return. The pilot was also drenched to the skin, and was shivering with the cold: he was soon, however, made comfortable on board the yacht by a change of apparel.

We now learnt that the place we had run into was *Havnefiord*, which was considerably to the southward of Reikiavik, and separated from it by two projecting points of land, and a small intermediate bay—so that we had, in fact, again passed our port. The pilot, however, soon brought us into our destined harbour, when the mystery was at once explained why we had twice passed it. A projecting neck of land, in the northern or north-eastern side of which the town is situated, entirely excludes the navigator from the possibility of seeing anything like a town or harbour in passing along the coast.

The Danish chart, though a correct one, is on too small a scale to navigate by—in fact, it is little more than a kind of index to a large survey made of the coast by order of the Danish government, of which we had only the reduced general outline,

and not the details contained in that on the enlarged scale; and we were told that it was only surprising how we escaped the many dangers that environed us. All our anxiety, however, was immediately forgotten from the moment the "Flower of Yarrow" rode at anchor opposite the town of Reikiavik, which bore south of us, and of which, more from curiosity than picturesque effect, I took the annexed sketch, whose only merit is, as every proprietor of the houses seen therein will vouch, its lineal accuracy.



CHAPTER IV

REIKIAVIK AND ITS VICINITY.

Appearance of the Town from the Anchorage—Submarine Volcanoes—Beach of Lava—Derivation of the Name of Reikiavik—Description of the Town—of the Inhabitants—their Houses and Gardens—Feebleness of Vegetation—The Cathedral and Public Library—Visit the Constituted Authorities—Agreeable surprise on finding the Governor an old travelling Acquaintance—Visit the Bishop—his great civility, and offer to be in any way useful—Fishermen's Huts—Want of Society in the Winter Months—Traffic by Barter with the Interior—Visit to the Salmon Fishery of Lax Elbe—to the Hot Springs—Nature of the Country in the Vicinity of Reikiavik.

A STRANGER who first approaches the shore on which Reikiavik stands, and has not prepared himself by reading for what he may expect beyond the simple fact, that it is the capital of Iceland, cannot possibly behold what he sees of it, and he sees at least the better half of the whole from the anchorage, without experiencing a strong feeling of disappointment. He perceives only a long row of houses, or rather the upper parts of houses, running parallel to, and close behind, a rising beach of black shingle, their red or brown roofs being the most conspicuous,

and the tops of the doors only, and perhaps about half of a row of windows peeping above the said beach; but he sees enough of them to satisfy himself that they are of a low mean character, and only of one story in height. On each extremity of this line of houses he will observe a rising eminence, scarcely deserving the name of a hill, on which he will perceive a number of sod or turf huts raised a little, and but a little, above the level of the ground; their roofs, and generally their sides too, verdant enough and well clothed with grass—the abodes chiefly of fishermen, labourers in the merchants' employ, and idlers, of which there were not a few at this time sauntering about the town. Among these hovels, or rather above them, on the western eminence, stands conspicuously the house of the physician-general of Iceland, or, perhaps more properly, surgeon and apothecary of Reikiavik, for he acts in all these capacities; which tall building, speaking comparatively with its neighbours, is kept in countenance by a still taller one—the only windmill on the island. On the eastern eminence are also placed a number of similar hovels to those on the opposite hill, and, at a distance beyond them, a monument of stones, raised by the scholars, when the only school on the island was at Reikiavik: it had been allowed to fall into ruin, but was recently converted by the present governor into a neat little look-out house, from whence he has a very extensive view of the

distant Snæfell Yokul, or snowy mountains, and the whole amphitheatre of the less lofty ones, which inclose the plain of Reikiavik, but most of which are *partially* covered with snow. The mountains of Essian to the north-east, the Snæfell Yokul to the north-west, and the Cape Reikianæs and mountains of the Goldbringe Syssel to the south, with the little islands in the bay and the few ships in the harbour, complete the view.

On landing by means of a jetty, of which there are four carried out into the water, the stranger will find himself at the foot of the rising beach, covered with slag and cinders, and all the accompaniments of the various kinds of lava, pebbles of all dimensions, rounded by the action of the sea, and almost all of them full of holes, as if penetrated by worms, mixed also with black sand, the decomposition of lava; and on one part of the beach, near to the water's edge, he will see a low range of vitrified rock split into masses, exhibiting imperfect, dislocated, and broken basaltic pillars.

Here then it would be impossible to mistake from whence the materials that compose this sea beach had received their origin, or to doubt that the great agent was fire: this, the appearance of the coast, the islands both above and below water, and the lava shoals, sufficiently testify. Of these shoals two very extensive ones exist in the

Faxé Bugten, which are inserted in the Danish chart by the name of *Hraun,* or lava shoals, having from eight to twelve fathoms of water upon them, while all around them the depth is from thirty-five to forty fathoms. These shoals, together with the sunken rocks along the coast, are considered to have once appeared in the shape of small islands above the surface, and subsequently sunk below it, just like the Sabrina and Graham Islands, both of which have left shoals below the spot where they had appeared above water. The little island of Vidoe, and three or four others, bear the strongest marks of igneous origin in their trap-rocks, imperfect basaltic pillars, and in the pumice-stone and cinders which surround them.

These appearances, combined with the character of the whole line of coast, carried conviction of the general accuracy of the picture of Iceland, as drawn by a traveller who passed over a greater extent of its surface than perhaps any other visiter, with the exception of the two Danes, Olafsen and Povelsen. "The opinion," he says, "that this island owes its formation to the operation of submarine volcanoes is not only confirmed by analogical reasonings, deduced from the appearances presented by other islands, which are confessedly of volcanic origin, but gains ground in proportion to the progress of a closer and more

accurate investigation of the geological phenomena which every part of it exhibits to the view of the naturalist. In no quarter of the globe do we find crowded within the same extent of surface such a number of ignivomous mountains, so many boiling springs, or such immense tracts of lava, as here arrest the attention of the traveller. The general aspect of the country is the most rugged and dreary imaginable. On every side appear marks of confusion and devastation, or the tremendous sources of these evils in the yawning craters of huge and menacing volcanoes. Nor is the mind of a spectator relieved from the disagreeable emotions arising from the reflection on the subterranean fires which are raging beneath him, by a temporary survey of the huge mountains of perpetual ice by which he is surrounded. These very masses, which exclude the most distant idea of heat, contain in their bosom the fuel of conflagration, and are frequently seen to emit smoke and flames, and pour down upon the plains immense floods of boiling mud and water, or red hot torrents of devouring lava."*

But we are yet only on the summit of the beach covered with volcanic productions. The flat country immediately beyond it showed no signs of its having been disturbed by internal fire, with the single exception of a volume of smoke or steam

* Henderson's Iceland, vol. i. Introduction, p. 11.

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which was observed rising out of the ground at a short distance; and this we afterwards found to be the permanent ebullition of a hot spring, which may have given the name of Reikiavik to the capital — "the smoking village." This is the more probable, as we have Reykum, Reykholt's-dals, Reykianæs, Reykendals-aa, and twenty others, at all of which are hot-springs emitting steam and smoke.

But the most remarkable feature of the country which surrounds Reikiavik may be called a negative one—the total want of a tree or a bush—and, being nearly an uniform plain,—the want of character. For several miles the surface appeared to be one continued bog, out of which protruded here and there some dark-looking rocks and detached stones, not in the least like boulders that had been rolled thither, but irregular, angular, and pointed masses, most of which seemed to be rooted in the soil.

Such was the unfavourable prospect of the neighbouring country as seen from the beach. The town itself did not much improve by a closer acquaintance; yet it could not escape us that this spot was the residence of the Stiftamptman, or governor-general,—of the Bishop of Iceland,—of the Tatsroed who presides over the Supreme Court of Judicature,—and of other public officers; and that it also was the principal emporium of the island. On the top of the beach, immediately in front of the houses,

vast quantities of fish were strewed about to dry in the sun. There were also three or four different square piles or stacks of the heads of fish, which it appears are kept for the home consumption of the fishermen and lower orders. Six or eight large scales, for weighing the fish, were placed in front of the merchants' dwelling and store houses; and numerous fishing-boats were drawn up on the beach, chiefly at the western extremity, the fishing season being apparently at an end, as none of these were launched while we remained at Reikiavik. In fact, I understood that the fishery had ceased for the season. The boats were a little like the Norwegian in their form, but stronger and better built. I should almost be inclined to say that they were the strongest-built boats I have ever seen in any part of the world; and yet there was nothing awkward in their shape or appearance. Judging from the weather we experienced, and the violence of the seas off the coast, their strength must be sometimes pretty severely tried.

In addition to the row of houses seen from the harbour, another row made its appearance behind it—perhaps I ought to say two imperfect rows, forming a sort of street, running at right angles with the former, near its western extremity. This street, or space between the houses, was encumbered with the same kind of rocks starting out of the soil that we observed in the plain. In this portion of the town is the residence

of the Landfogued, or treasurer; and near the farthest extremity is a sort of tavern, or society-house, where the Danish and other mercantile residents assemble, forming a kind of club, where they play billiards and other games, and have dinners, balls, and other amusements occasionally.

The houses on the sea line are generally those of the merchants, who are chiefly Danes; they are built, as in Norway, of wood, and covered with shingles or planks, and to each is attached a store-house for their different articles of merchandize. The only stone-built house is that of the governor, situated at the eastern extremity of the line, and this building was formerly the workhouse—not for the maintenance of the indigent poor, but made use of rather as the house of correction. The episcopal residence is near to the coast, considerably to the eastward of that of the governor—a very comfortable house, built of brick, and white-washed.

The cathedral stands apart behind the sea-line of houses; it is built of stone, and has a large roof of planks; the steeple is a square tower of wood, roofed, and contains a couple of bells. Under the roof of the church is the public library, said to contain about six thousand volumes, to which the inhabitants have free access, being allowed, under certain restrictions, to have books at their own houses; and I was assured that the residents were generally very fond of reading. The books consisted mostly of general

and ecclesiastical history, in the northern languages—German, Swedish, Danish, and Norwegian;—such as related to Iceland, their Sagas and their Eddas; and it contained also a few English books, generally the writings of our best poets, and also a collection of the Greek and Latin classics; besides some manuscripts, chiefly theological, the production of the clergy of the island. The Icelanders were once deservedly famed for their literary productions; and it is pleasing to find that they still keep alive the spirit of research and that literary pursuit for which their ancestors were distinguished.

Reikiavik Cathedral.

Near the church is a considerable space of ground, set apart as a public cemetery, which

had once been inclosed with mud-walls, but was now open in many parts, the whole appearing to be much neglected; and the contrast between this burying-ground and those one generally meets with in Norway was indeed very striking; not a stone nor a block of wood being anywhere raised to the memory of the departed—all being reduced to the level of a simple molecule of turf, under which they were left to sleep in total oblivion. It may be said of the tenant of this common burying-ground, that at least he here

> ——— "Lies in peace with all his humble race,
> And has no stone to mark his burial-place."

Near to this piece of ground is a small lake, from which a rivulet runs across the beach into the bay, and at the mouth of which some have imagined that a facility is afforded for forming a little harbour to admit the fishing-boats, which would certainly be a great accommodation and benefit to the poor fishermen. To each of the merchants' houses, and to those of the governor, the bishop, and landfogued, is attached a small piece of ground laid out as a garden, mostly if not entirely for the purpose of raising a few culinary vegetables; and few indeed they were, as far as my observation went, and of a very sickly and languishing appearance. The produce consisted generally of cabbages, just forming into heads, turnips (I believe Swedish), parsley, and potatoes,

about the size of crab-apples. The present was considered to be an unfavourable season, but still better than some others, when all attempts had failed to raise vegetables of any kind; but in the very best of seasons they never arrive at any degree of perfection. Radishes, and turnip-radishes, mustard and cress, seemed to thrive the best, and were looking pretty well in the governor's garden; but he bestowed much care and labour on his little piece of ground, and often took great pleasure in pointing out to me the healthy state and vigour of three or four plants of the mountain ash, which (after I forget how many years' growth) had attained to the height of about four feet, and in the possession of which he prided himself not a little, assuring me that they were the largest, and in fact the only plants that deserved the name of trees within the distance of many miles around Reikiavik.

The gardens I am speaking of had apparently abundance of good soil, and were all in a sheltered situation, facing the south-west; and yet, one knows not why under such favourable circumstances, everything in them appeared to be languishing. It was the same in all the more inland situations where anything like a garden was observed; the most common vegetables were of no use, nor indeed did they appear to be deemed worthy of any attention, growing generally among the weeds

common to the country. Dr. Hooker says that in many of these little inclosures with turf, the cabbages were so languid and small, that a half-crown piece would have covered the whole of the plant; and the potatoes and turnips also came to nothing. I do not recollect that we saw a cabbage-head at all in any part of our future journey; and yet when we were at Reikiavik the weather in August was comparatively mild, Fahrenheit's thermometer fluctuating in the daytime from 49° to 63°, and nothing approaching to frost occurred during the short nights. If then there be not some other circumstances adverse to the growth of a far more hardy and vigorous vegetation, I should be disposed to ascribe the want of success to mismanagement.

On our first landing, a crowd of the male inhabitants were assembled on the beach to congratulate us on our arrival; among them was one English merchant of the name of Robb, who had resided there for twenty years, and was married to a native lady. No other Englishman, it appeared, resided on the island, the trade with England having almost entirely ceased, with the exception of a ship now and then from Newcastle and from Liverpool with salt. I did not observe any females among them, and we were rather surprised, as well as disappointed, that the novel event of so many strangers arriving in a smart yacht had not

excited that degree of female curiosity which we have been told was so remarkably displayed by the Iceland damsels on some former occasions.

Our first visit was to the house of Mr. Knudtzon, a Danish merchant, and cousin to our excellent companion of the same name, who had not been apprized of our arrival, neither had he received the least intimation of a visit from his relation, and was therefore greatly astonished, as well as delighted, at this unexpected arrival of his kinsman at Iceland. Nothing could be more kind than was his reception of all of us, and his attention was unabated during our stay on the island. Accompanied by this worthy gentleman, we next paid our respects to the governor, who received us with the utmost politeness, and offered his services, frankly and unostentatiously, in every possible way in which he could be of use to us in prosecution of the objects of our visit. I nnderstood his name to be Krieger; and while I was inquiring of Mr. Knudtzon whether it was likely he could he a connexion of a Danish gentleman of that name, whom I had travelled with in Switzerland a few years before, the governor came up to me, and said he thought he recollected my features, and asked whether we had not met among the Alps, and if my name was not Barrow? It will readily be imagined how delighted, and at the same time how astonished I was, to find that this governor of Iceland was the self-same Krieger that my brother and I had travelled with among the

mountains of Switzerland—still the self-same pleasant, jocular, and good-humoured man that we found him to be six years ago. He folded me in his arms, expressed himself delighted beyond measure, and I really believe that from that day, during our stay in Iceland, there was not a wish that I could express that "my friend the governor" would not have exerted every nerve to gratify. It was really and unaffectedly a happy moment of my life; for when very young I had experienced acts of kindness from him. I had frequently inquired after him when at Copenhagen; but as the name of Krieger is by no means an uncommon one, I could never learn where the individual I sought for was to be found. How strange it is that we are thus sometimes, out of all expectation—and I may say calculation—thrown together in the world! that two travellers, accidentally meeting together in the Alps, and forming a temporary, but I flatter myself a mutually agreeable acquaintance, should, after the lapse of a few years, when all intercourse had ceased, meet once more, equally unlooked for, of all places in the world, on Iceland! Finding him still just the same happy and pleasant individual as before, I could not resist the temptation, while congratulating him on his elevation, to condole with him at the same time on his unhappy lot, which I understood had consigned him to the *workhouse*;—at which he laughed heartily, and observed it was a true joke, but no bad one for the governor, who

had never been so well lodged as when he got into the workhouse. It seems the building was not only the best in the town, but that it had been for some time perfectly useless for its original design, as there was nobody bad enough to put into it: a circumstance which reflects no small praise on the morality of the inhabitants of Reikiavik, whose good conduct rendered such a place unnecessary—a place

> "Where children dwell, who know no parents' care;
> Parents, who know no children's love, dwell there."

Like all sea-port towns, however, Reikiavik is not free from the vice of drunkenness, which is by no means uncommon among the fishermen and the lower orders in the town. Indeed we happened to witness a deplorable instance of it in the person of an old woman, who was lying under a boat upon the beach, in a miserable state of intoxication, and who, we afterwards heard, ended her existence on that very spot.

Nothing could exceed the civility of Mr. Krieger to all of us, and particularly to myself: he hoped to see me frequently—at breakfast, dinner, or supper as might suit me most—and that his door was open to me at all hours of the day. He could not offer me lodgings, as his whole house was occupied by Prince Frederick of Denmark and his suite, at this time on a tour to the north-eastern part of the island, but expected daily to return.

This intelligence of the prince having gone on his travels in the island was to me a disappointment almost as great as that of missing the ship-of-war that carried him out from Copenhagen; for had I been here, when he set out, I have no doubt whatever—indeed we afterwards learnt—that he would most cheerfully have admitted the whole of our party to join him. On mentioning to the governor the difficulty we had in finding Reikiavik, he said we were not singular, for that a French brig of war, in the preceding year, had got by mistake into Havnefiord.*

Our next visit was to the bishop, who received us with great kindness and affability: his manners were condescending and extremely agreeable, showing him at once to be a man of education, and a gentleman who had seen the world. His name is Jonson, and his age about sixty-eight or seventy; he possesses a good library of the best books, in various languages, and well stored with a variety of manuscripts relating to Iceland, chiefly to the ecclesiastical department. Though our visit was but an hour before dinner-time, he ordered wine and coffee to be served to us, according to the

* This was *La Lilloise*, sent to protect the cod-fishery on the coast of Iceland. Not returning in 1833, another brig, *La Bordelaise*, was despatched in search of her, but could obtain no intelligence of her; in fact, the commander of the latter does not appear to have been a good selection for this service, having a dread of being caught in the *ice*, which however he never once fell in with. It is said that a whaler picked up a floating chest, in which was found a chart of the track of the unfortunate *Lilloise*.

custom of the country, which is always observed, whatever the hour may be when a visit is made.

The principal officers of the government of Iceland are soon enumerated: the stiftamptman, the chief magistrate or governor of the island; the *steff* or *staff* being the ensign of his authority; and the amptman, the lieutenant-governor under him. This large island was formerly divided into four ampts or provinces, corresponding with the four cardinal points of the compass, which are now reduced to three; and as the governor acts in that capacity in the southern provinces, there are, in fact, but two amptmen. Each ampt is divided into syssels or districts, over which a sysselman presides, who surveys and values the several estates in his district, collects the king's taxes, regulates the assessments, and corresponds in these matters with the landfogued or treasurer at Reikiavik. He is also the chief magistrate of the district; holds courts for the settlement of disputes, and for trying petty offences. Each sysselman has a repstiore, who is overseer of the poor, and constable of the parish. The two amptmen, the sysselmen, and the repstiore reside of course in their several districts. The tatsroed, or chief justice, holds, with two assessors, a criminal court at Reikiavik; but the office, we were told, is nearly a sinecure, not more than six or eight cases, civil and criminal, coming before the court in the course of a year. The common crimes

are those of petty theft, for which the offender escapes with a good whipping.

Having received a commission from a member of the Statistical Society in London to procure answers to certain questions, chiefly relating to the statistics of Iceland, I took the liberty of consulting the bishop as to the best quarter I could apply to for the required information, when he at once said he should be most happy to procure for me that or any other information which I might be desirous of, and was in his power to obtain. I found however another gentleman, perhaps more generally informed on such matters, who had the advantage of speaking and writing English, which the bishop could not do.

Having now paid our respects to the principal inhabitants of the town, and tired ourselves with strolling about a place that can afford but little interest, we returned on board the yacht to dinner, when we were favoured with Mr. Knudtzon's company, whom we found to be a most agreeable and intelligent gentleman.

On the following day I strolled about the neighbourhood of Reikiavik, and entered one of the fishermen's huts, for they deserve no better name, near the eastern extremity of the town. The exterior of these hovels are very similar in their construction to those of the Irish, who are said to have been the first people who visited Iceland, having, as it

is supposed, been accidentally driven upon its shores. This is stated by the most accredited historians o. the country, on the report of the first Norwegian discoverers of Iceland, who relate that wooden crosses, bells, and other relics which denoted Ireland, had been picked up on the coast. If this be so, the only vestige that now remains of anything Irish is to be found in the construction of the hovels I am speaking of. The Iceland hut however is still nearer to the description given by Dr. Johnson of the hovels of the Hebrides, which, both in their mode of construction, and in the interior, very nearly resemble those of the Icelanders.

An Icelandic Hut.

It is also said, and with more probability, that a group of islands on the south coast of Iceland, which bears the name of Westmanns Islands, were

so called, because a settlement of Irish and Scotch was established on them at a later period; and that the name was given to these islands from the circumstance of the new settlers having come from places *west* of Denmark.

The lower part of an Icelandic hut is built of rude stones to the height of about four feet, and between each row layers of turf are placed with great regularity, to serve instead of mortar, and in fact to keep out the wind. A roof of such wood as can be procured rests upon these walls, and is covered with turf or sods. There are no windows,—

> "Save one dull pane that, coarsely patch'd, gives way
> To the rude tempest—yet excludes the day."

And not always this; a cask or barrel with the two ends knocked out answers the purpose of a chimney; but the smoke is frequently allowed to escape through a hole in the roof. The only fire that is ever burnt within their walls is that of the kitchen, which forms a small separate apartment, and is frequently detached from the house, with which however it generally communicates by a dark passage. On stooping under the door to enter one of these cottages, I immediately found myself in a narrow passage with a clay or earthen floor, on each side of which, about midway, there was a shelf some four feet from the ground. On one of these shelves was spread out what ap-

peared to be a bed, but without any protection on the side; and on the opposite one was placed a variety of articles of clothing. On the ground beneath these shelves were piled up a large quantity of dried fish, and odds and ends of all sorts thrown together in the utmost confusion. At the farther extremity of the passage I entered the kitchen, in which a small fire was smothering: the apartment was full of smoke struggling to make its escape through the small aperture above; and as there was no window to admit the light, it was no easy matter to grope one's way out again. This hut was by no means of the worst description, though it appeared to me wretched enough; but the miserable abodes of the poorer inhabitants of a fishing village, than which Reikiavik can set up no higher pretensions, are not to be taken as a fair specimen of the cottages of the peasantry of the interior, which we have yet to see.

I cannot well conceive a more dreary residence than Reikiavik must be during the five winter months, when the ground is covered with snow, the nights long and cold, and generally stormy—when their slumbers must be disturbed by the roaring of the sea on the high stony beach, and the howling of the northerly blast, to which their houses are directly opposed. During the summer there is some society by the residence of the Danish merchants; but most if not all of them take their depar-

ture at the end of the season for Copenhagen, and return with the ships of the spring. The governor and the bishop, the landfogued, the doctor, and a few other public functionaries, are all that remain. The governor complained of this want of society, which he had now borne for five winters; but as he was this year to return with the Prince of Denmark, he lived in the hope that something more agreeable awaited him than the resumption of his government, especially as he was an old servant of the crown, having previously been employed in the Royal Library of Copenhagen.

Our stay at Tronyem, among other disappointments, lost us the opportunity of seeing the annual assemblage of the peasantry, who come down in the early part of the summer to Reikiavik, before the hay-season sets in, to dispose of their produce, and carry back with them such articles of luxury or necessity, as their circumstances, their tastes, and their wants may induce them to take in exchange. The greater part of the trade in this and other small sea-ports is carried on by way of barter, the quantity of money in the colony being very small, and few of the peasantry possessing any of it, which indeed is hardly necessary; the merchants receive their exportable articles at a certain price, according to the state of the market, and pay them in such foreign commodities, also at a regulated price, as they may require. The arrival

of these people creates a kind of fair, which occasions no little bustle and business in the capital. The peasantry bring down in boxes or little chests or skin-bags, as it may happen, slung across their horses' backs, wool and woollen manufactured goods, such as cloth, knitted stockings and mittens, butter close-pressed and packed in barrels, skins of cattle, calves, sheep, and lambs, tallow, fialgras, or *lichen islandicus*, horses and cattle, but not many of these; in short, whatever their farms will supply. In return for these, the articles they take back are coffee, sugar, tobacco, snuff, a small quantity of brandy, rye and rye-bread, biscuit, wheaten flour, salt, soap, and such other small articles as are in constant use for domestic purposes. Those who can afford it purchase a small supply of linens and cottons, which of late years have become of more common use, and which must tend greatly to cleanliness and the prevention of that very distressing and disgusting disease, known by the name of scurvy, and probably that still worse, the leprosy, which no doubt woollen clothing, if not kept very clean, when worn next to the skin, tends to engender. Those who are not far removed from the sea-coasts, and follow the occupation of fishermen, bring to market chiefly dried cod and stock-fish, salted cod, dried salmon, oil of seals, sharks, and whales, and seal-skins.

Before the month of June this visit to Reikiavik

would be impracticable, on account of the miserable condition of their horses after a long winter's fasting from grass; for while the snow is on the ground, there is no herbage for them, except for those near the sea-coasts, where I understand they may be seen greedily devouring every species of *fuci* or sea-weed that are found plentifully on every part of the coast. The small quantity of hay that is generally got in is almost exclusively set apart for the cows; on these and the sheep, which come in for a share, every family in a great degree depends for its clothing and subsistence. The snow is sometimes scraped off the ground to allow the sheep to feed on the little herbage beneath it, as they can subsist on a short bite, and the lichens afford them a supply of nutritious food. The poor horses fare the worst; the peasants hash up for them messes of fishes' heads and bones, chopped up with a little hay, and boiled altogether in water; but with such scanty food, especially when it happens to be a hard winter, towards the spring of the year they become miserably poor and are reduced to mere skeletons; it is surprising, however, when the grass begins to spring up, how speedily they recover themselves and get into flesh.

Having missed this fair, there was little or nothing going on at Reikiavik to engage our attention; and as our present stay was intended to be only just as long as was necessary to complete

preparations for a journey to the Geysers, which, with the leisurely or lazy manner, and the awkward contrivances, of the persons employed to make them, was estimated at three days. We proposed, in the mean time, to devote one of those days to an excursion to the *Lax Elbe*, or salmon river, generally called *Lax-au*, the latter being pronounced like our *awe*, and signifies river. This stream empties itself into the bay of Reikiavik, at about six or seven miles to the eastward of the town. As we understood the river to be navigable by such boats as our small cutter, as high up as the first falls, near the foot of which the salmon are usually caught, we proceeded thither in her. My two angling companions promised themselves a good day's sport, and armed themselves with their rods and lines, and flies of various sizes, shapes, and colours, to suit the eye or the taste of an Icelandic salmon. For my own part, after the unsuccessful experiment made at Lierfossen, I was content to go as a mere looker on. We had read, on the passage out, of the extraordinary gay scene that was exhibited on the appointed day for catching the salmon in this river, which was represented as a regular annual festival, when all Reikiavik and the country round about, far and near, assembled at a particular spot to which the fish had previously been driven, and in such multitudes as to exceed belief; that nothing was to be seen but happy and cheerful countenances; that the utmost familiarity prevailed

among all ranks; for that men, women and children, of all ages and conditions—the bishop, the stiftamptman, the tatsroed, the landfogued, the amptman and the sysselman, the doctor, the midwife, the washerwoman and the tailor—might all be seen conversing with each other without restraint, and on terms of perfect equality; that with regard to the fish, the men, and the women too, had only to wade into the pool, seize them in their arms, and heave them out upon land, where others collected them into wooden panniers to be conveyed to Reikiavik, and there prepared for drying or salting, as the case might be; and that in this way it was not unusual to catch from two to three thousand salmon in one day.

All this would have been delightful enough to behold; but I discovered, before we started, that reform had found its way even into the salmon-fishery of Iceland, and that *on avait changé tout cela;* that the fish are now caught in a more quiet and rational way, once or twice in the week, according to the demand; that the quantity of fish, however, that frequents this river had not perceptibly diminished; and that it was still a curious sight to see such a multitude of large fish assembled at the foot of the falls in the river.

As it was deemed prudent to take a man with us in the boat who was acquainted with the navigation of the shores of the bay and of the river, we engaged a person to pilot us. Arriving at its

mouth, we found its channel hemmed in between two high banks of rugged and cellular lava, and in various places rocks of lava were seen to rise out of the water above the surface, and in many others were hid below it; so that whenever our men attempted to pull heartily, the pilot checked them, saying, if they went at that rate, they would soon have a pointed rock through the bottom of the boat. Multitudes of eider-ducks were swimming about the mouth of the river, as well as on and near the rocky islands in the bay, and gulls and several other species of sea-fowl innumerable. The eider-ducks were so remarkably tame as to make it evident they are but little disturbed in Iceland: indeed so familiar are they said to be with man, especially in the breeding season, which was now just over, that they frequently make their nests close to the houses, and in spots which have been prepared by ridges of stones artificially built up for them; and in such places, while incubation is going on, these innocent birds are so tame, that it is not unusual for the female to remain on the nest, and suffer herself to be fondled without any attempt to fly away. The lining of their nests, being the downy substance plucked off their own breasts, is taken away, even a second and third time, when the poor bird has plucked herself nearly naked; after this she is left undisturbed. Eider-down is used for stuffing bed-coverlets for the winter, and furnishes also a small article of export; their eggs too are

taken away once or twice, and are sold to be eaten in the same manner that plovers' eggs are with us. We understood that there is a penalty of half a dollar for shooting one of these birds: nor is this all, as the delinquent is also made to forfeit his gun.

As the distance from the mouth of the river to the falls was only a mile or thereabouts, we were not long in reaching the spot. At a little way below the falls a kind of weir was thrown across the river, or rather a causeway of stones, in which were fixed two or three wooden boxes, with openings sufficient to let the fish pass through in going up; and being narrowed at the other end, and having pointed spikes, in the manner of a mouse-trap, the salmon, when once through, could not by any possibility get back again, but were left swimming about in the pool formed between this dam and the foot of the falls; and though these could not be more than ten or twelve feet in height, which is nothing for a salmon-leap, yet being a broken cataract, whose waters bounded among rugged and pointed rocks of lava, I should apprehend it was impossible for a fish to succeed in surmounting it.

In this pool we could see the salmon swimming about in shoals. Here, of course, they are easily taken either by turning off the water, or by a net; and we were told that about this season of the year four or five hundred are caught weekly, and generally by the latter process. The fishery belongs to

the Crown, and the rent paid for the privilege of the exclusive right of taking the fish forms a small branch of the public revenue.

Our two anglers plied their lines close under the falls, and also below the ripple occasioned by the causeway, but all in vain; the fish would not take. In vain did they try to tempt them with every variety of the beautiful flies which they had with so much care manufactured on the voyage out, calculating at least on two salmon for every specimen. The trout, however, were not quite so dainty: several of these were hooked and brought to land, which was some small consolation for the disappointment which the larger fry had occasioned. An angler is proverbially a patient and enduring creature, but our two disciples of Izaak Walton, more particularly one of them, exhibited signs of impatience that could not be mistaken, and set down Iceland salmon as a set of stupid and unnatural fish, for having the bad taste not to rise at such orthodox flies, so eminently calculated to delude their appetites.

As Mr. Broder Knudtzon and myself were spectators only of the sport, or rather want of sport, we too grew impatient, and, leaving our companions to the enjoyment of it, set out, with a little boy for our guide, across the country between the fishery and Reikiavik, intending to make a short détour in order to visit some boiling springs half way between the fishery and the town. There was no road across this

plain, and the surface was strewed with slags of lava, between which were tufts of grass growing, and, among other plants, a beautiful species of *vaccinium* in full blossom. The *Lichen Islandicus* was growing plentifully, and the *Lichen rangiferinus* beautifully, among the lava. I brought some of this latter plant to England, and on spreading it in a saucer of water, all its little delicate tubular ramifications became full and plump, taking their natural position; but it turned black the second day. The plant however that was here the most conspicuous among the tribe of mosses was the *Trichostomum canescens*, a soft, greyish moss, pleasant to tread upon, provided the surface of the lava beneath it, on which it seems delighted to grow, happens to be an even one; but we found it, as Mr. Hooker did, filling up the interstices, and only rendering the walking upon it the more precarious and dangerous.

There was no want of bogs or swamps, but these we sometimes succeeded in avoiding by jumping from one tuft of grass to another, with which the boggy patches were thickly studded, and also with the cotton-grass (*Eriophorum polystachion*), of the fine silky fibres of which the inhabitants make wicks for their lamps. Having cleared the morass by the help of these little tufts or hillocks, we arrived at the spot where we had observed smoke to be issuing from the ground. It was a clear spring of water in the midst of a morass covered with verdure. Close

to the spring was a small wooden shed, on opening the door of which we discovered five or six young women busily employed in washing linen in the warm water of the springs, which they had taken up in tubs. I imagine these Naiads were not over-pleased at our intrusion, as on Mr. Knudtzon, out of mere curiosity, taking hold of the tassel of the cap worn by one of them, to see of what material it was made, the young lady took it in high dudgeon. We thought it best therefore to leave them to themselves, and to give them no further interruption.

Having left my thermometer behind, not being prepared for the visit to these springs, I was unable to ascertain the temperature, but I should judge, by plunging in my finger for about a second of time, that the temperature was under 200°. A rivulet runs close by the springs which receives the heated water, smoking as it runs along, and the banks of which, for a considerable distance, exhibit a more than usual luxuriance of vegetation. The water from the springs is remarkably clear, and I could not discover the slightest smell or taste, though it is said that, when left to stand for some time exposed to the air, a slight sulphureous smell is perceptible. It is said that there are also hot springs thrown up in the bed of the rivulet, and that bubbles are frequently perceptible on the surface; I did not observe any myself, but the rivulet contained an increased heat to a very considerable

distance below the springs, as was obvious from the smoke rising from it, as well as from the verdure on its banks, as I have just mentioned. This small stream empties itself into Reikiavik Bay, a little to the eastward of the town.

It would appear from the account given by Olafsen and Povelsen, that small eels have often been found dead in the heated streams of Iceland, but not those of a large growth; and Mr. Hooker found a number of small eels dead in these hot springs of Reikiavik, which had probably been carried down by the stream into the heated part. Von Troil says, "Of the trouts, it has been observed that when they come up the rivers and brooks, and approach the hot springs, they are fond of staying in the lukewarm water, where they grow so fat as to be scarcely eatable."

On reaching Reikiavik we found ourselves not a little fatigued by our walk "over bog and quagmire," and resolved at once to go on board the "Flower of Yarrow," and enjoy a quiet and comfortable dinner. Our two piscators had not yet returned, but they soon made their appearance, equally tired with ourselves, and not a little out of humour with the stupidity and obstinacy of the Icelandic salmon, which had been so saucy as to reject some of as nice flies as were ever thrown by a rod; but they brought with them several fine trout which were not to be despised.

In the evening we were favoured with a visit on

board the yacht from the governor, who sat and chatted, and smoked a cherry-stick from the Mediterranean with great glee, to which Mr. Smith treated him. He told us how irksome and dreary he felt his situation on this desolate island, on which he had spent five years of his life without once quitting it. He repeated what he had before told me, how dreary it was in the winter-months, when all the Danish merchants had departed from the island for Copenhagen; and that himself, the good bishop, the landfogued, and two or three others, were left to while away the long melancholy nights almost in a state of torpidity; that it was some consolation, however, to have before him the prospect of accompanying the prince back to Denmark, when he hoped some other situation would be provided for him,—as a second spell amidst "frost and fire" would be enough to drive him to despair.

It would delight me to find that this excellent man's expectations have been realized.

The next day was consumed in paying visits, in passing an hour or two with the governor, in packing up our clothes, and settling various points connected with our intended visit to the Geysers, for which we were to start on the following morning.

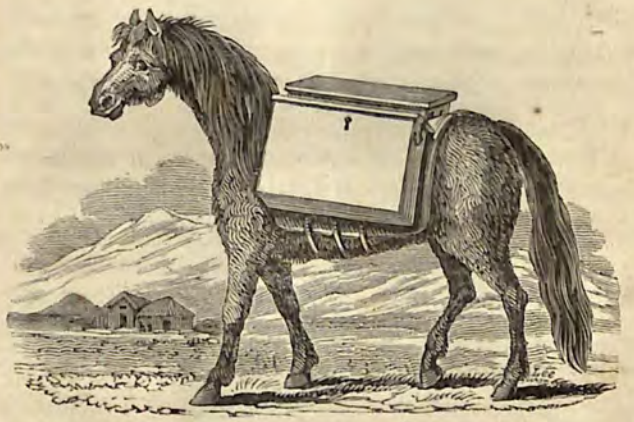
CHAPTER V.

JOURNEY TO THE GEYSERS.

Preparations—Pack-horses—Saddle-horses—Guides—desolate aspect of the Country—tameness of Birds—Lava—Chasm of *Almannagaiaa*—Waterfall down the. Chasm—River *Oxer-aa*—Church and Parsonage of *Thingvalla*—sleep in the Church—Chasm of *Flostagaiaa*—fine Prospect—silver Ornaments made by the Peasantry—ardent Spirits, quantity consumed—Effects of on a Clergyman—Thicket of dwarf Birch-trees—supposed change of Climate—Trees found in Peat-bogs—*Surturbrand*, where found—Vegetation in high Latitudes in Norway—*Thingvalla-vatn*, or Lake—Swans, melodious singing of—third Chasm of *Hrafnagaiaa*, or of the Ravens—volcanic Cones and Craters—whole Fields of Lava—Laugerfell Hills—Church and Parsonage of *Efstadalr*—Hay-making—Appearance of Hecla—Peasantry—River *Bruer-aa*—first sight of the Geysers.

Our preparations for a journey to the Geysers having been at length completed, we left Reikiavik on the morning of the 1st of August. Our cavalcade consisted of six-and-twenty horses, twelve of which had been sent onwards to serve as relays. Our party was composed of Mr. Smith, Mr. Hutchinson, Mr. Broder Knudtzon, his servant, who was a Norwegian, and myself; besides which were two guides and a boy, making eight in all. Of the twenty-six horses, sixteen were appropriated as saddle-horses, including eight as

reliefs, and ten were set apart as baggage-horses, five being loaded at a time, and the other five reserved as reliefs. To each of us was appropriated a small wooden box or chest, which was to contain the few articles of clothing that we might require during our absence. These were slung across the horse's back, one on each side, in the manner represented in the engraving.



An Icelandic Pack-horse.

In order to prevent the backs of the animals from chafing, or the packages galling their sides, two pieces of turf or sods are placed across for their protection. They appeared to me to consist more of matted grass than earth, which indeed would soon shake to pieces, and were no doubt the fibrous roots of that plant which Dr. Hooker has described

in his *Flora Islandica* by the name of *Menyanthes trifoliata.* "This plant is important to travellers who are not acquainted with the route in the morasses; for they are well aware that wheresoever it grows they may safely pass; its closely-woven roots making a firm bed upon the soft subsoil. The Icelanders call it *Reidinga,* and employ the matted tufts to prevent the saddle or any load from chafing the horses' backs." These mats, if I may so call them, are made fast by ropes or cords passing round the belly. On the back of the horse, and upon the matting, is a sort of wooden saddle, with three small pegs standing upright, on which the boxes are hung and made tight by cords fastened to the handles. This mode of travelling and packing the horses is universal throughout the island. All the articles that are brought from the interior for sale at the sea-ports, and all those taken back for winter consumption, are packed and carried in this way. There is not, in fact, in all Iceland such a machine as a wheel-carriage: no, not a wheelbarrow; and indeed, if there were, they would be useless, as there is nothing in the shape of a road on which they could move. The *way* or the *path* either lies over beds of lava, so rugged that the horses are obliged to pick their way, or over boggy ground, where it is equally necessary to avoid those places into which the animals might sink up to their belly, and which, when left to themselves, they are remarkably skilful in detecting. In some places,

the path resembles a deep rut formed by the cracking or disruption of a stream of lava; and here the rider is pretty much in the predicament of the Irishman who was carried in a sedan chair without a bottom in it; for in all such places we were able to relieve our horses, by putting our feet on the two sides of the sunken path.

Our saddles were supplied to us by some of the Danish merchants who reside at Reikiavik, and who kindly lent them for the occasion. Clumsy as they were, without them we should have been at a sad loss. There was nothing remarkable in the equipment of the horses on which we were mounted, save the bits of the bridles, which were somewhat ponderous, being sufficiently large to have broken the jaws of the hardest-mouthed animal in a regiment of dragoons. The Icelandic horses are small, seldom standing above fourteen hands, and frequently not more than twelve or thirteen. In so great a number of horses promiscuously taken, there was no want of variety as to shape, size, colour, or quality; but being so taken, it was far beyond our expectation to find that there was not one animal among them that could be called a bad one, and only one that might be said to be decidedly vicious; and this one certainly tried the patience of his riders, as we alternately mounted him in the course of the journey. He had very nearly killed one of Mr. Smith's pointers whilst I happened to be on his back. The dog had, un-

perceived, come close behind the horse's heels, when he immediately kicked at him, and struck him a severe blow on the head. The poor animal staggered backwards, and appeared to have received his death-blow; but the wound bled profusely, and he fortunately sustained no permanent injury.

But that which surprised us not a little was, that notwithstanding the poverty of the food of these animals and the scantiness of it—for in winter they barely exist, and have nothing whatever in the summer months but the grass and small plants they can pick up on the hills—they were all in high condition as to flesh. We had moreover been told that Prince Frederick had taken with him, on his tour to the north-eastward, all that were worth having in the neighbourhood of Reikiavik, to the number of fifty. This however we were afterwards satisfied could not have been the case, as we had an opportunity of inspecting his Royal Highness's stud on his return to Reikiavik; and there was not a single animal in the whole group that was in any way superior to the generality of our own.

The Icelander is not a very active person, and our guides fully participated in the general character of the country, which is that of a want of energy and bodily exertion. Some hours were consumed in packing the baggage-horses, yet the articles were neither bulky nor heavy. Our cloth-

ing occupied five wooden boxes, to which were added a small quantity of provisions, such as we were not likely to meet with on the journey, most of them stowed away in barrels. A tent, with all its necessary appendages of pegs and pole, formed also a part of our baggage; and a long wooden case, containing fishing-rods, made up the sum total, or nearly so, of our goods and chattels.

We were all rather singularly equipped for the journey: some of the party wore large boots coming up to the knee, similar to those used by fishermen, which were found to be invaluable in crossing many of the rivers on horseback. For my own part I was content with a pair of waterproof *Wellington* boots, which I had purchased at Tronyem for about sixteen shillings English money, and they were found to answer thoroughly, being in all respects what they professed to be.

A great part of the time consumed by the guides was lost in determining how the baggage should be divided, and on which horse should be placed the heaviest and on which the lightest load; and more time still was expended in shifting the loads from one horse to another several times after they had, as I thought, made up their minds. At length all being arranged, we each mounted our steeds and proceeded onwards. We were escorted for a short distance by two or three of the Danish residents of Reikiavik, who, after taking leave of us, proceeded to Havnefiôrd. The first part of our route was strewn over with rocks, partaking of the same

character as those on the lower part of the beach at Reikiavik, being angular and pointed, and generally of five sides, apparently the fragments of basaltic pillars. Nothing could be more uninviting than the first part of our ride, and it did not improve as we proceeded; on the contrary, the view on all sides was marked with one general aspect of desolation. Not a shrub raised its head above the ground; not a habitation attracted our attention; and not a living creature was anywhere to be seen, save a few plovers and curlews, whose mournful notes were well suited to the dreariness of the surrounding scenery. These birds appeared to be so tame, confident as it would seem not to be molested, that they scarcely gave themselves the trouble of moving out of our way; so confiding indeed, that it would almost have been an act of wantonness to think for a moment of destroying them. Travelling onwards to a considerable distance, we overtook our twelve relief-horses, which had been turned loose to feed on a large and tolerably well-clothed grass-plat. Here we rested for about half an hour, and the twelve horses thus added to our cavalcade were driven loose in front of our baggage-horses.

The guides rode immediately behind the latter, and we ourselves brought up the rear. After this our bridle-road for a little while was tolerably good; but it was soon followed by a tract of porous and curled lava that was rough and unpleasant enough.

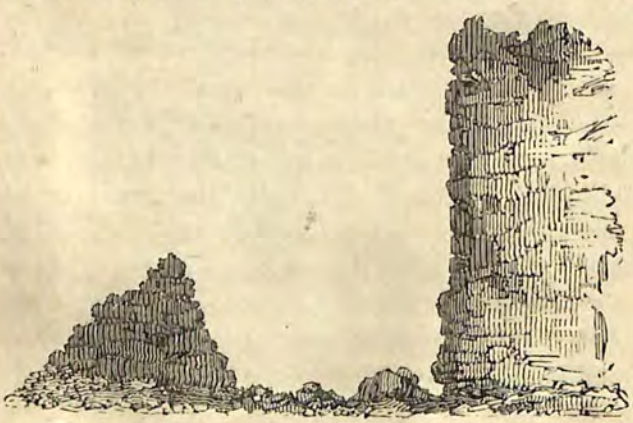
Beyond this we reached a sort of morass, through which were running several small streams, and over

these we were compelled to wade, which gave me an opportunity of trying the good quality of my Tronyem waterproof boots.

Our route now led us close by the side of three or four small lakes, near which the verdure was rich and the pasture excellent; and here we observed a few cows and sheep feeding: many of the latter were so far remarkable that they had four horns, and the fore part of the body was black and the remainder white. The cows appeared to be of a larger breed than those generally met with in Norway; but the smallness of our horses, when placed beside them, may perhaps have shown them off to a greater advantage. They were however beautifully marked, and in shape resembled the Alderney, having generally very small horns, but frequently they are without any.

As soon as we had accomplished, according to our calculation, about half of our day's journey, we halted for the purpose of relieving our baggage-horses, at the expense of undergoing the same tedious operation of loading and unloading, packing and unpacking, half a dozen times before our Icelanders could satisfy themselves that they had put the saddles and the packages on the right horses. It would have been useless to hurry them, and we therefore made a virtue of necessity, and bore it all with becoming patience, amusing ourselves in the meanwhile by taking some refreshments, which none of us felt indisposed to do after a pretty long and very tedious ride.

On a ridge of mountains, at no great distance from us on our left and not very high, we observed snow lying in considerable patches. Our route at starting brought us nearer to this ridge, and as we proceeded along, the surface soon changed its character, and became more and more rugged and strewed over with large masses of lava: this in a short time brought us to the verge of a deep chasm, inclosed between two walls of rock of a dark-brown colour, composed apparently of large blocks or tablets of trap or basalt, the upper part of tufa. This extraordinary chasm we were told we must cross by descending down a steep precipice, not less I suppose than one hundred and twenty feet at this spot; the opposite wall appearing only about thirty or forty feet, and the width, narrowing



Transverse Section of the Almannagaiaa.

a little towards the bottom, by the declination of lower wall, might be about sixty feet.

The direction of this extraordinary rent in the mountain is about north and south, and is said to extend three miles. We were told also that there are two others, cutting into the slope of the mountain, and parallel to the present one. Its name is *Almannagaiaa*, the meaning of which no one appeared to know, not even the natives, but it seems to relate to something in which *all mankind* is concerned.

The descent was down a ravine near one of its extremities, which conducted to the bottom of the chasm by a steep and rugged path of loose and angular fragments of lava, mixed with blocks of trap. It is so steep and rugged, that travellers are always recommended to dismount and let the horses find their own way; but as we happened to be a considerable way before our guides, having left them to take care of the baggage-horses, and had received no such caution from them, we all kept our seats, to the no small amazement of the Icelanders when they heard of our exploit. To attempt to descend such a place on horseback might perhaps, in most countries, have been considered rather hazardous; but in Iceland, where the animals are accustomed at all times and in all places to go over the roughest lava, there was little or no fear of their making a false step. On reaching the bottom, which was well clothed with grass, we could see along this wonderful chasm to a considerable distance: on either side the gigantic walls rose to a fearful height above us, more particularly that on our left or western side, which was as perpendicular

as if its huge blocks had been piled up by human hands, and its rugged summit might, to a perfect stranger, appear at first sight to be crowned with the ruins of some gigantic building. We rode a short distance along the bottom of the chasm until we came to an opening in the lower wall, or that on our right, which carried us out to the open country. Observing however, at a short distance farther on, a fine waterfall tumbling down into the chasm with a great noise over the edge of the higher precipice, I rode on to have a more distinct view of it;

Waterfall of the Oxer-aa into the Almannagaiaa.

and standing on the verge of the lower side, directly opposite to it, I made a hasty sketch, which may be sufficient to convey a notion of the higher wall of this enormous gap, which has attracted the notice of all who have travelled on this route.

Sir Joseph Banks pronounced it to be a sinking of the earth, in which he has been followed by most succeeding travellers. The direction of the chasm is at right angles to the axis of the ridge of mountains, and the whole range to the eastward of it continues to be much lower than that part of it to the westward. It may therefore perhaps be but a sudden descent of the ridge, though it is obvious that fire has been an active agent in this quarter, and may have rent the mountain asunder; for from this spot commence those indications of volcanic convulsions that have torn asunder the surface the whole way to *Thingvalla*, and even as far to the eastward as the Geysers.

When Olafsen and Povelsen were at Thingvalla in 1740, attending the *Althing*, or general court of justice, which at that time was held there, the *Oxer-aa*, or Ox river, which is said to have disappeared and re-appeared several times, was dried up on this occasion for the space of eight days; but one fine morning a tremendous noise alarmed the assembled multitude, which was followed by a burst of water, carrying before it rock and earth, and, making its way in a torrent, fell into the chasm of Almannagaiaa in a fine waterfall down the

higher wall, and, passing through an opening in the lower or eastern side, continued its course into the lake of Thingvalla. This river we had presently to cross on horseback; and not long after we approached a spot rendered famous more than 800 years ago, and from thence celebrated in the annals of Iceland down to the present time: at this place we were to pass the night. When our guides told us we had arrived at the end of our journey, we looked about for a town or a village, a church or the parsonage, but nothing of the kind appeared. We had heard and read that there was a church at this place: in vain did I look for the steeple, the usual appendage to a church in all the countries I have hitherto visited; I could discover nothing that gave any such indication, nor indeed anything like a human habitation. Mr. Smith, however, at length discovered some low roofs covered with grass, one of which, being larger than the rest, he had no doubt was the church of Thingvalla, and so indeed it proved.

We now perceived a range of low huts near to the larger one with verdant roofs, which our guide pointed out as the residence of the clergyman. We resolved therefore to wait upon the priest, but he saved us the trouble; for, having some intimation of our approach, he had come out of his house to receive our party. From the appearance of the hovels, as well as that of the incumbent, we at once asked and obtained permission to occupy the church

for the night, which we had the less scruple in doing, as we had heard that it was the usual, and in fact the only spot that travellers had any choice of for passing the night. Accordingly our horses were unpacked and turned out loose till the morning, and our saddles and boxes were deposited in the aisle of the church, where there was just room enough to receive them. The dimensions were indeed small enough, and every part was crowded with various kinds of stores, such as clothing, provisions, barrels of fish, a huge side-saddle such as is used by ladies, and a quantity of wool: when to these were added our own chattels, the aisle was nearly impassable.

As this building, consecrated to religious purposes, was altogether different from any I had before seen, curiosity led me to take its dimensions: the extreme length was twenty-three feet, but of this eight feet were devoted to the altar, which was divided off by a partition stretching across the church, and against which was placed the pulpit. Over the pulpit were the following Latin inscriptions,—

"Scio opera tua."
"Habenti dabitur."

A small wooden chest or cupboard, placed between two very small square windows at the end of the building, not larger than a common-sized pane of glass, constituted the communion-table, over which was a miserable representation of the Lord's Sup-

per, painted on wood, and apparently of great antiquity. The width of the church was ten feet, and the height of the walls about six feet. These were wainscoted, and from them large wooden beams stretched across from side to side. On these beams were placed in great disorder a quantity of old bibles, psalters, and fragments of dusty manuscripts. The interior of the roof, the rafters of which rested on the walls, was also lined with wood. On the right of the door as we entered, and under which we were obliged to stoop considerably, we remarked two or three bells suspended from the beams within reach. Four or five benches with backs to them, so crowded together as almost to touch one another, were placed on each side the aisle, a narrow passage being left between them. There were also some benches placed against the wainscoted walls, round that part which formed the altar. The accommodation was said to be sufficient for forty people; but I am quite at a loss to imagine how they could all find seats, or even room to stand. It is not however often, if ever, that the church is so crowded, as the number of inhabitants living in the immediate neighbourhood is very small—not above twelve or fourteen families in the whole parish.

After partaking of some of the refreshments which we had brought with us, and to which were added some good coffee, some milk, and some excellent trout from the lake of *Thingvalla-vatn*,

supplied by the clergyman, who was unremitting in his attention, and repeatedly entered the church to offer his services, we now began to consider how we could make ourselves as little uncomfortable for the night as circumstances would admit. The benches in the aisle were too narrow to make them available for the purpose of sleeping on, so were the benches round the altar. There was no other place then but the floor; as soon, therefore, as we had despatched our supper, and wrapped ourselves up in our cloaks and coats, we lay down and endeavoured to sleep, two on each side of the communion table, or large chest that served for one. This substitute was raised on a sort of platform, and between it and some benches, which were placed against the sides of the wall, we were obliged to *squeeze* in as well as we could, and very close stowage it was.

Parish Church of Thingvalla.

As I was employing myself in making the foregoing sketch of the church, the clergyman, who seemed to take a particular interest in what I was doing, and apparently much pleased with my performance, asked me to accompany him to a spot from whence he assured me I should be able to get a very fine view, worthy of my pencil; accordingly we proceeded together to the place, which turned out to be one of the chasms we had heard of as running parallel with Almannagaiaa. It is not more than two hundred yards from the church, and was called by the priest *Flossagaiaa,* the meaning of which he was no more able to explain than that of the former.

The face of the country hereabouts has been strangely torn asunder and disrupted. This deep chasm was filled with water, to the height perhaps of forty or fifty feet from the top where we stood; and my clerical guide pointed out how very clear and transparent the water was; telling me that if I threw in a stone, its descent might be traced to a very considerable depth, as it worked its meandering way downwards, perhaps to the depth of forty or fifty feet more. The fact was certainly so, but I did not consider this effect in the same curious point of view that the priest seemed to do. It is neither more nor less than this: when the eye is placed near to the surface of the water, and perpendicular to it, the light is reflected from the surface, and obscures all objects

beneath it; but when the eye is at a distance above the surface, the rays of light which have penetrated the water will be refracted, and show clearly objects at a great depth below the surface. Seamen are fully aware of this, and from the mast-head will see rocks or reefs, or even shoals below the surface of the sea, when those on deck can discover nothing of them. In the present instance the dark compact walls of lava which contracted the dimensions of the chasm might tend to increase the effect.

The prospect from this spot, though not beautiful, was romantically grand, notwithstanding the confused and hideous masses of lava strewed around, and the dismally barren appearance of all the surrounding mountains. The Thingvalla-Vatn, which is a grand expanse of water apparently from ten to fifteen miles in length, and six or eight in width, is here seen to great advantage; and two black-looking islands, the probable creation of volcanic fire, rise boldly out of the clear waters of the lake, and are visited only, as far as I can learn, by some thousands of water-birds and sea-fowl. Their names are *Sandey* and *Nesey*, but what the meaning of the words is, if any, I could not learn; from hence too there is an excellent view of the upper part of the high wall of the chasm of Almannagaiaa. I expressed my thanks to the clergyman as well as I was able to do in indifferent Latin. We managed, however, somehow or another to make ourselves under-

stood by means of a slate and pencil, as our pronunciation of many of the words did not quite accord; he appeared to be a good kind of man, and when we parted it was with many professions of friendship on both sides.

On my return to the parsonage I found our guides still busily employed in getting the horses packed, having already expended a couple of hours about it, and having still an hour's work before them. In order to pass away the time, I asked my friend the priest if he thought that his good lady would have any objection to my making a pencil sketch of the dress she wore, as I wished to take home a sample of the female costume of the

Full head and body dress of the Farmers' Wives and Daughters.

country; he immediately made the proposal to his wife, who seemed amused and flattered. I had

hardly commenced when, like the Lapland lady, she asked me not to draw the cap she wore, which was one of the common ones with a tassel, but begged to be allowed to change it; she accordingly ran into the house, and in about a quarter of an hour or twenty minutes returned dressed out from head to foot in her best apparel, and certainly looked very neat, and the cap particularly smart and becoming. I was much struck with the workmanship of the silver massive girdle or belt, with an ornament above it, which the lady wore round her waist; in point of execution as well as design it appeared to me to be equal to anything of the kind which a jeweller in England could have fabricated, and yet these kind of articles are the work of the peasantry, but, as may be supposed, only of a few, the demand for them being very limited: those few however who have learnt the art may find employment, as the ladies of rank—that is to say, the clergymen's wives, and the families of public functionaries and merchants—are in the common habit of wearing these girdles. The silver is obtained by melting down the old Danish dollars, without the addition of any alloy; most of the ladies wear them fastened in front on a belt of richly-worked velvet.

Our good pastor the next morning was equally attentive, in furnishing out our breakfast-table before our departure, as he had been the preceding evening. We had then pressed him to take some *grog* with us, which he declined; but on offering

him a glass of brandy this morning he readily accepted it; the prince, when there, had asked him to take a glass of punch, but he informed his highness he only drank brandy. I suspect, however, that this poor clergyman rarely indulges in luxury of this kind. When we consider the long, cold, and dreary winter nights, and the destitution of almost every article of life that constitutes comfort, it is not to be wondered at that spirituous liquors should hold out an almost irresistible temptation, and the more so in the proximity of the capital, where they can easily and cheaply be procured, which is not the case in the more distant parts of the island.

By the reply received to one of the statistical questions I was commissioned to ask, it would appear that the whole quantity of spirits consumed on the island amounts only to two bottles per annum to each individual of the population; and of this allowance, judging from what I have learnt of the very limited incomes and the general poverty of some three hundred clergymen on the island, two hundred of them know not what spirituous liquors are. Dr. Hooker mentions the extraordinary effect which a small portion of rum produced on the good old priest of Middalr, whose stomach had been accustomed only to a milk diet and a little coffee. "He begged me," says the Doctor, "to give him some rum to bathe his wife's breast; but having applied a portion of it to that purpose, he drank

the rest, without being at all aware of its strength, which however had no other effect than in causing this clerical blacksmith*, with his lame hip, to dance in the most ridiculous manner in front of the house. The scene afforded a great source of merriment to all his family, except his old wife, who was very desirous of getting him to bed, while he was no less anxious that she should join him in the dance. †"

Dr. Hooker observes that this very circumstance is a convincing proof how unaccustomed this priest was to spirituous liquors, otherwise a small quantity that could not have exceeded a wine-glass full would not have elated his spirits to such a degree.

At length it was announced to us that all was ready, and having taken a friendly leave of our respectable clergyman, we left Thingvalla. Its name implies a court of justice in the open field. The Althing, or general assembly of the nation, was held here in the open air; here too was held the supreme court of justice, and this continued to be so till the year 1690, when a plain rustic building of lava was erected, and justice therein administered till about the commencement of the present century, when the court was removed to Reikiavik. On this memorable spot too the Christian religion received its final establishment,

* All the clergymen are blacksmiths, for a reason which will be stated hereafter.

† Journal of a Tour in Iceland, p. 110.

and the ancient paganism was abolished, more than eight hundred years ago. It is now a place of desolation, and the country around it presents a wild picture of physical disorder and confusion.

Immediately after leaving Thingvalla, the route we pursued led us through what might be called a thicket of dwarf birch-trees, rising out of the numerous cracks and crevices of porous and contorted lava mixed with slag; they had not attained a greater height than from three to five feet above the ground, and among them was also a sprinkling of dwarf willows. These were the first specimens of arborescent plants of any description that we had fallen in with since leaving Reikiavik. The historians of Iceland, however, would have us believe that, when the first settlers arrived on the island, they found the lower parts of the country covered with forests of birch-trees so thickly as to prevent their penetrating into the interior; and they assign as a reason why there are now no trees, that hurricanes and streams of lava have destroyed them, and that the Greenland ice besetting their shores has prevented them of late years attaining to their former growth—and, in short, that the climate has altogether changed. Few I believe lay any stress on change of climate. That intelligent traveller Von Buch has furnished an answer to this supposed change of climate. "It is impossible," he says,—speaking of the high latitudes on the coast of Norway,—"it is impossible to adduce,

with certainty, a single fact to show that the mean temperature for several years, at the same place, has diminished even *half a degree*. Where is the region, since the earth was inhabited by human beings, where spruce or Scotch firs could formerly grow, and cannot grow now, or where could oaks and birches grow? *Never beyond the region which the temperature has assigned to these trees**." To the birch of Iceland the temperature seems to have settled its maximum at about ten feet in height, and three inches in diameter, though Dr. Hooker thinks he saw some, the loftiest of which might be eleven or twelve feet in height, and five or six inches in diameter at the base†. Another traveller tells us the growing stumps of several birch-trees were visible (to his own eyes of course) *two feet* in *diameter!* He must have seen them in a dream, for he would find it difficult, I suspect, to discover a birch-tree two feet in diameter even in all Scotland.

The late Archbishop Von Troil says there are certain proofs of wood having formerly grown in great abundance in Iceland, and he adduces, as proof, the instance of wood having been found in peat-bogs, and the *surturbrand*. Of the former I have not seen any certain description, either as to the nature or size of the wood, to enable me to offer any opinion. The only specimen seen by me

* Travels through Norway and Lapland, p. 180.

† Journal of a Tour in Iceland, p. 261.

was near Reikiavik; when one day returning with the governor from the hill above his house, we met a peasant carrying under his arm a large stump of a birch-tree, of about the thickness of an ordinary man's thigh. As this was so unusual a sight, I did not lose the opportunity of questioning him about it; the peasant informed us that he had dug it up from a morass close to Reikiavik, at a depth of ten or twelve feet from the surface, and that he was constantly in the habit of finding similar logs equally large in the same morass, and at the same depth, which the peasants about Reikiavik search for to sell as fire-wood. Although the wood appeared internally to be much decayed from rot, the bark was quite perfect. I regretted that, as we were then on the point of leaving Iceland, I should be deprived of the opportunity of making more minute inquiries on a subject which must be considered as one worthy the attention of future travellers, there being now nothing of the description growing within a very considerable distance from Reikiavik.

Of the antiquity of surturbrand, the Archbishop has himself given proof, by the position in which it is found, of an epoch, which he must be a bold man, who would venture to calculate its date*, for he tells

* We have heard of one man, however, who assumed the several strata of lava as a criterion for calculating the age of the world—*il Canonico Recupero*—who attended Brydone up Mount Ætna. "If," says he, "it requires two thousand years to form a

us that it has been found, as indeed we know it has been, under four several strata alternating with solid rock of basalt, compact and porous lava, and scoriæ. There can be little doubt that many of the specimens of surturbrand are of fir, and others of oak; I have one of the latter, with a knot so decidedly marked that it can scarcely be mistaken, and it is not pretended that either of these trees ever grew in Iceland, which we may safely assert is not the fact, at least since the time when elephants and mastodons inhabited the shores of the Polar Seas. Why firs and birches of a considerable growth should not grow here, is a curious question, since both have been found by Von Buch and De Capell Brooke growing vigorously up the sides of the mountains in Norway, as high as the latitude 68½°, full five degrees higher than the southern coast of Iceland—nay, at Tromsoe, in 69½°, the former says "the birches remained vigorous and beautiful more than six hundred feet upwards *." The latter traveller, speaking of the same place, says "Forests of birch and aspen swept down the steep sides to the

scanty soil on the surface of a bed of lava, as I have discovered seven distinct strata of lava, the lowest of these must have flowed down the sides of Ætna fourteen thousand years ago." The bishop warned him to be upon his guard, and not to pretend to be a better historian than Moses; but he declared it went against his conscience to make his mountain so young as the lawgiver makes the world, and that he must stick to his theory at the expense of his canonicals.

* Travels through Norway and Lapland, p. 220.

water's edge*"; and at Alten-gaard copper-mine, in 70° latitude, fir-trees of considerable size skirt the hills.

The question becomes still more involved, when it is considered that the great island of Newfoundland, full twenty degrees below the part of Norway here spoken of, can boast of no such trees, though its southern coast is in the latitude of figs and grapes and almost of oranges. But *revenons à nos moutons.*

We soon reached the northern extremity of the lake of Thingvalla, and passed close to its margin, near which were a few eider-ducks swimming about, a great number of sea-gulls, and at some distance from us a group of swans, which we were told are exceedingly numerous in this and other lakes of Iceland. The eggs, the feathers, and the down of this fine bird supply the peasantry with an article of food and also of commerce. They are found chiefly in the lakes of the central parts of the island where, like the rein-deer, they remain unmolested; but in winter, when the lakes are frozen, they betake themselves to the sea-shore. "They are said," says Von Troil, "to sing very harmoniously in the cold dark winter nights; but though it was in the month of September when I was upon the island, I never once enjoyed the pleasure of a single song." Olafsen and Povelsen also say,

* Travels through Sweden, Norway, and Finmark.

from report, that in the long and dark nights they wing their flight in the air in large flocks, making it to resound with their songs, which accord much with the sounds of the violin; that the peasantry are frequently awakened from their soundest sleep by the song of these birds, but they never regret this disturbance, as, in the hardest frost and snow, they prognosticate a thaw, which never fails to happen in the course of two or three days. Mr. Henderson would appear to have been more fortunate than any of these visiters, for he both saw and heard "a number of swans swimming and *singing melodiously* in the river;" having thus the honour of rescuing the Greeks from the imputation of palming a fable upon posterity, by consecrating the swan to Apollo the god of music, because it sings *melodiously*, though, as they state, only in the article of death.

During the whole of our journey both yesterday and to-day, we fell in with multitudes of plovers, curlews, and snipes, all, except the latter, remarkably tame: these, and a few hawks and ravens, were all of the feathered tribe that we met with between Reikiavik and the Geysers. On leaving the lake we soon had to cross another, being the third, of those extraordinary disruptions of the earth: it is called *Hrafnagaiaa*, the "chasm of the ravens." Our guides cautioned us to be extremely careful how we proceeded, as the narrow

ridge of rugged and porous lava that crossed the chasm was full of holes, into any of which should the animal place his foot the rider would have a very fair chance of being tossed into the deep abyss, the width of the path not being more than three feet. This natural bridge, if it may be so called, must have been formed by a rapid flowing of lava just at the time that the rent of the earth was taking place, otherwise it is not easy to conceive how it found its way across the gap.

Looking back from hence I was rather surprised to see rising, as it were out of the earth, a long continued dark-looking wall stretching to the northward on the side of a ridge of hills or inferior mountains, which I soon recognised to be a portion of the long-extended rock, forming the loftier side of the chasm of Almannagaiaa. The bridle-road over which we had hitherto passed was occasionally better than we found it generally, so that we sometimes ventured upon a trot, and proceeded even to a canter, but we soon found that the old proverb of—"the more haste the less speed," might be well applied to us on these occasions; for, when going at this speed, the baggage horses would so jostle one another in the narrow paths, that in every ten minutes on an average, we were under the necessity of halting to fasten some of the goods and chattels which had broken loose, and were tumbling off the horses' backs. There

was besides another objection against going at such a speed: we sometimes found ourselves in the midst of the baggage-horses, owing to some of them lagging behind; and as the guides drove these onwards by hallooing and shouting at a furious rate, in increasing their pace they would pass close to us at a rapid trot, to the great danger of our legs, which must have suffered materially from the sharp corners of the boxes, if we had not kept a very good look out. We used to derive much amusement by seeing the guides, every now and then, at a full gallop over the lava after some of the horses which were straying from the others, particularly the light relief horses which took the lead and were entirely loose. Like the Norwegian horses, those of Iceland are fond of rolling themselves in the sand, and one of our baggage-horses this day, taking the opportunity, threw himself down, and with the boxes on his back commenced a series of rolls, in which the others would certainly have joined, if the guides had not ridden up in time to prevent them.

As we travelled along we observed some of the common heaths in full flower, and large patches of the wild thyme, which strongly scented the air; but the most remarkable plant which, from its profusion, gave a character to this part of the country, was the *tricostomum canescens*, whose silvery light grey colour enlivened the surface, and

formed a most extensive and delightful carpet to tread on, as soft as the finest velvet.

On passing a subterranean cavern in the side of the range of hills on our left, our guides pointed it out as a curiosity, and we dismounted from our horses to inspect it; it was encrusted round with the same kind of porous and blistered lava which covers the whole surface of the country as far as the eye could reach; it penetrated about twenty or thirty feet under ground, and was not more than five or six feet high; it was not an object worth noticing—indeed, caverns of this kind are so little uncommon, that we passed several of them during the day; they only tended to show that the whole surface of this part of the country had suffered some tremendous convulsion. This was further confirmed by a volcanic cone rising out of a gentle ascent a little off our route; it consisted of a small crater, whose sharp rocky sides and top were vitrified by fire, from whence, and from several other small craters, scattered about in this neighbourhood, there must have been, at some period or another, fearful eruptions, the surrounding country to a great extent having been apparently in a liquid state of melted stone.

The unusual circumstance of a vast field of continuous lava (not merely a stream) that exists in this part of Iceland, without any volcanic mountain from whence it could have been thrown out, can

admit of no other explanation than that which the succession of these small conical mounds appears to afford. The one we visited was hollow, dark, and deep; the singular forms assumed by this lava may be accounted for, by the very gentle slope—in many places none at all—down which it had to flow, or, in other words, was propelled onwards by the streams which followed it. In spots where it had met with obstacles it has risen into blistered hillocks of twisted lava, scoriæ, slags, and pumice; in other places, where it appears to have been diverted from its course, it has assumed every form of contorted and curled surfaces, putting on sometimes the appearance of thick twisted ropes or cables, and in some places were long chasms like so many deep ruts, to the annoyance of our horses which had to cross them.

In contemplating this continuous field of lava and the numerous craters that run along the feet of the *Laugerfell* hills in one wide belt, a curious inquiry suggests itself: if it be generally admitted, that the internal fire which melts the exploded materials be deep-seated in the earth, how are they pushed up to the very summit of the highest mountains, such as Chimboraço, Pic of Teneriffe, Ætna, Stromboli, and Vesuvius? One might almost be tempted to ask, did these mountains exist before any eruptions took place, or did the eruptions create them? We are pretty

certain that the cones, which usually terminate such mountains, have been produced by the lava overflowing their craters; but why this deep-seated lava should so generally be found to work its way to their highest summits, is not so easily explained; the prolonged resistance it has to encounter being much greater apparently than if it exploded from the sides, which it sometimes does. In Iceland none of the volcanic mountains are high, and are generally isolated, as Hecla, Snæfell, and Skaptar Yokuls; but it would seem that along the southern coast, for a hundred miles inland, the lava that spreads over the country is ejected mostly from such small cones as I have noticed, thrown up immediately out of the surface; in the sea, also, on the southern and western coasts, numerous islands have been thrown up, some still remaining, and others having disappeared, forming dangerous rocks and shoals, similar to those two marine volcanic islands, which sprang up and disappeared but a short time ago—that of Sabrina, near the coast of St. Michael in the Azores, and that of Graham opposite Pantellaria on the coast of Sicily. The first rose thirty fathoms, or 180 feet, through the sea, and to the height of 300 feet above it, making from the base 480 feet; the second rose 100 fathoms, or 600 feet, through the water, and 150 feet above it, making in the whole height 750 feet.

Another curious question might here be raised. If we suppose the bottom of the sea to be lifted up, and the whole mass of Graham's Island to be so firmly united, while mounting up, as that no portion of water could insinuate itself either below or within it, to what height on land would the same impelling force have lifted the same mass—that is to say, if it had only the resistance of the air to encounter, instead of the water? But I am not sufficiently skilled in hydrodynamics to solve it, though a friend has undertaken the task. *

* The island of Graham rose from the bottom of the sea against a pressure of about 600 feet of water, or from a depth of 600 feet. The question is, how high would the same force have carried it if there had been no water?

Time and *velocity* being excluded from consideration, we have, I think, only to regard the absolute weight that was overcome by the island, or by the bottom of the sea in its effort to rise.

Supposing the depth to have been 608 feet, and 32 feet of water to be equal to the pressure of the atmosphere, the whole 608 feet of water must have been equal to 19 atmospheres, to which the actual atmosphere is to be added, making 20.

Now, it is an acknowledged principle, in estimating the force of a machine, that it is the same thing whether a weight of a given number of lbs., say 1000, be raised 1 foot, or a weight of 1 lb. be raised through the 1000 feet; therefore if the weight were constant through the whole number of feet, it would be the same thing whether the weight of 20 atmospheres were raised 608 feet, or the weight of one atmosphere raised 608×20, or 12,160 feet. But the weight of superincumbent water is not constant, but gradually growing less as the bottom of the sea is forced up, and by the time that it has risen 32 feet, the weight will be reduced to 19, instead of 20 atmospheres. We ought, therefore, to divide the whole distance into a number of equal parts, and ascertain what the

The diminutive cones of Iceland that have exploded such vast fields of lava, may, like the

the weight of water is at each, and the smaller we take these parts the nearer we shall get to the truth. To take the distance at every foot would be a needless trouble, and for the sake of convenience it may be sufficient to take them at intervals of 32 feet. The force then required for the first 32 feet that the bottom has to rise will be represented by $32 \times 20 = 640$, which is the number of feet that the same force would have raised a weight of one atmosphere. For the next 32 feet, it will be 32×19; for the next, 32×18, and so on until it comes to the last 32 feet, which will be 32×2, and the sum of all the terms will represent the number of feet through which the same force would have carried a weight of one atmosphere.

The two extremes are 643 and 32, the number of terms 19, and consequently the sum of them will be—

$$\frac{640 \times 64}{2} \times 19 = 6668.$$

We shall, however, obtain a nearer approximation if, taking the intervals the same, we employ the weight suited to the *centre* of that interval as a multiplier, instead of the weight suited to the commencement of it, and the terms of the progression will then be—

$$32 \times 19\tfrac{1}{2}$$
$$32 \times 18\tfrac{1}{2}$$
$$32 \times 17\tfrac{1}{2},$$

and the sum of 19 terms of such a progression will be only 6384. In this calculation a great number of things are however assumed that are not strictly true.

1st. It is assumed that the density of water is no greater at the depth of 600 feet than it is at the surface, which is far from being true.

2nd. It is assumed that the force of gravity is uniform, which is not the case, strictly speaking. The force of gravity must be greater 600 feet below the surface of the sea, than it is 6000 or 7000 feet above it.

3rd. It is assumed that the weight of the natural atmosphere is uniform

sunken islands, have once been of much higher elevation, and broken down by their own weight into the cavities made by the lava they ejected.

In some parts of the sides of the nearest hills, or the Laugerfells, were mounds or inequalities that at a distance bore the resemblance of fine sand or ashes—indeed, every part of these hills wore a most rugged and barren aspect, and no description can possibly convey an adequate idea of the scene of desolation which here presented itself both on hill and dale. It was a complete chaos, and glad were we when our horses stepped over the last ridge of lava into an even and extensive plain, in which were descried two lakes, called *Laugervalla* and *Apa-Vatn*, connected by a river winding in a serpentine course through the plain. Near the former we observed at a short distance three or four places, out of which were issuing volumes of steam or smoke; one in particular, close to the margin of the lake, had been observed from a considerable distance, and appeared more violent in its ebullitions than the others; but anxious to get

uniform during the course of nearly 7000 feet, whereas it is well known that, in ascending that height above the level of the sea, the weight of it is very sensibly diminished.

4th. It is assumed that the volcano upheaved the crust of the earth existing under the sea in one close and compact, and not as a loose and detached mass, which we know, in the latter case, could be more easily lifted under water than in the air.—E. G.

to the end of our journey, we did not go out of the way to visit them.

The pasturage in the plain, though marshy in parts, being very good, we made a halt in order to allow the horses to feed. There were several cows of a larger breed than those of Norway; sheep and goats grazing in the plain. We took the opportunity of visiting a cave, which the guides assured us that no traveller omitted to visit, and to cut his name on the soft sandstone which forms the entrance to it. We found a few names there, and by way of passing the time we added our initials to the number, but there was nothing remarkable that we could discover in the cave.

Proceeding on our journey, we had to pass through another small thicket of dwarf birch-trees, some of which were above five feet from the ground, and a few might reach to the height of six feet. One of our guides, on observing me to take notice of them, volunteered the remark, that here grew the finest wood in Iceland; perhaps he meant that he had seen—for the Iceland peasantry, those at least in the neighbourhood of Reikiavik, seem to have a very limited knowledge of their country. He was right, however, as far as my own observation went, during our rambles in the southern part of the island.

The grassy plain had brought together a neighbourhood of three or four small clusters of cottages,

the proprietors, no doubt, of the cattle we had seen; and not far from them was a humble church, similar to that we had slept in, the night before, at Thingvalla. A little farther on we arrived at the Parsonage of *Efstedalr*, where we resolved to pass the night; but as the church appeared more uncomfortable (if possible) than that of Thingvalla, we determined upon pitching our tent and sleeping therein in preference. The dwelling is, as usual, composed of a low range of turf-roofed huts, common to all the clergy and the agricultural peasantry. The only variation is a room more or less, or, which is the same thing, an additional hut, for every room has its separate roof. The following sketch will give a fair notion of all :—

The Parsonage-house of Efstedalr.

The several apartments are sometimes lighted by a hole in the wall, sometimes through the wooden gable-ends, and sometimes through the

roof. In one of these rooms the family reside and eat, in another they all sleep; another is the kitchen, another a general store-room for all kinds of lumber, clothes, and provisions; another the smithy, besides two or three little out-houses, consisting of a shed for horses, another for cows, and a third for sheep, these being generally behind in a sort of inclosure.

At the back of the parson's dwelling at Efstedalr there were three or four fresh stacks of hay which had only just been collected together. Indeed the peasantry, where we met with any, seemed to be everywhere busy in getting in their hay, the crops of which on this extensive plain were abundant, and appeared to me fully equal to any I had seen in Norway. The site of the houses, whether of the clergy or the farmers, is generally so chosen, that a considerable space of good grass-land is contiguous to them, and receives all the manure collected about the cattle-yard: this space, or a small part of it, is often rudely inclosed with stone walls, and I believe bears the name of the *toon;* hence, probably, the Dutch *tuin,* a garden, and our *town,* from being anciently surrounded with a wall of mud or stone. We selected a snug spot for our tent at the end of the row of huts, and close to the hay-stacks, as affording shelter from a strong wind which blew during the night. We strewed the inside with

hay, which we found to be a far more comfortable bed than the hard and damp floor of the little church of Thingvalla, but we were terribly tormented with whole swarms of small flies.

The priest was probably not at home, at least we saw nothing of him, but his wife showed us great attention, and provided us with milk, butter, and coffee. The butter was, as I always found it to be in Iceland, of a white and tallow-like appearance, owing to its being partially, and often wholly, made from sheep's milk: it has no disagreeable taste or flavour, but is not made in a cleanly manner, being generally full of hairs, the sight of which is enough to render it very unpleasant to the eye. The Icelanders are said to be as fond of rancid butter as the Italians are of rancid oil, and they keep it for many years hard pressed down in barrels; but in such a country as this, where there is no market for it, the practice may probably be one of necessity. We have hitherto been fortunate enough to procure it fresh.

From Efstedalr we obtained a fine clear view of the three-coned Hecla, which we first discovered faintly soon after leaving Thingvalla. From the very remarkable clearness of the atmosphere, and the loftiness of the mountain, I should have supposed it to be distant about twenty miles, but it was near forty, which is equal to two days' journey: its black sides, supporting a covering of pure white snow, in which full one-

half of its upper part was enveloped, brought it much closer to the eye than it actually was. The annexed is a sketch of its appearance from the spot, and I have availed myself of the opportunity of introducing our cavalcade as it then consisted.

The following day, being that of the Sabbath, we had an opportunity of seeing some of the peasantry of the parish in their best attire, as they passed through Efstedalr on their way to some neighbouring church in which service was to be performed, which confirmed us in our opinion that the clergyman of this place had gone from home. These poor people make as long journeys to attend divine service as those in Norway, and without the benefit of the decent roads which they have in the latter country. It is always a gratifying sight to see this day respected, and the more so, the greater the sacrifice that is made to observe it. The dress of the men was pretty much the same as ours, but, as in Norway, they suffer their hair to grow long; the females were dressed very nearly alike, and the costume was similar to that already described as the common dress of the peasantry; but instead of the cap and tassel, they all wore the head-dress with the snow-white curvature in front.

Some of the ladies were riding across the horse, while others were more comfortably, and certainly more elegantly, seated in capacious side-saddles, something resembling those in which children are

placed on the backs of donkeys. The back of the saddle or chair was sometimes open, with the exception of a flat brass bar which, being curved, formed the support to the rider's back. These saddles were covered with small carpets or rugs, very prettily worked, in divers colours and patterns, by the Icelanders themselves, and by no means void of taste and ingenuity in the workmanship. Just as we were on the point of starting from Efstedalr, another party came up on their way to the Geysers: it consisted of two gentlemen and three ladies: one of the former was a remarkably fine young man, and proved to be a son of the bishop; and one of the ladies, as we afterwards found, was his betrothed bride.

Continuing our journey, we very soon came to the *Bruer-aa*, so called from its having a small wooden bridge thrown across it, or rather across a chasm in the midst of the bed of the river itself, into which, from both sides, the water rushes down in the form of a cascade. The river here ran with great impetuosity, and we could not help thinking it was a singular place to have chosen for a bridge, to which the horses could only arrive, and afterwards descend, by wading through the water belly-deep on both sides of it. Having crossed in safety, I thought it, from its singularity, worthy of being sketched. Neither this river, nor any other we had yet occasion to cross, was sufficiently deep to oblige the horses to swim; but the Bruer-aa

was so rapid as to make it disagreeable to look down at the water as it flowed past.

Continuing our route through the plain, and doubling the point of the ridge of hills on our left, which here trended a little to the northward, we observed several volumes of light smoke or steam, at a short distance, rising out of the surface of the ground at the farthest extremity of a gently rising plain. By these ebullitions we were apprised that we were not now far from the object of our journey, and that they could only proceed from the plain of the Geysers; and so it turned out to be the case.

FALL IN THE BRUER-AA, OR BRIDGE RIVER.

CHAPTER VI.

THE GEYSERS.

The Plain of Boiling Fountains—Plan of the Ground—Description of the *Great Geyser*—Its Mound, Basin, and Tube—Deposite of the Water—Delicate Incrustations—Temperature of the Water—The *Roaring Geyser*—The *Strockr*—The *Little Strockr*—Explosion of the Great Geyser—Difficulty of making a correct representation of—Comparison of the Jets—Maximum height of—Proximate cause of these Fountains—Inquiry after Lord Stuart de Rothsay's horse, supposed to have fallen into the Geyser—Mr. Faraday's Analysis of the Geyser Water—Return towards Reikiavik—Sleep in *Middalr* Church—Apparent poverty of the Priest—Arrival at Reikiavik.

One of the earliest and most clear, distinct, and intelligible accounts of the Geysers we were about to visit, is that which was published in "The Philosophical Transactions" of Edinburgh, as a letter from Mr. (now Sir John) Stanley to Dr. Black. In speaking of these boiling springs of Iceland, he says that the descriptions given by Dr. Von Troil, Archbishop of Upsal, are so accurate, that it will not be in his power to give much new information. The same observation may with more propriety be applied to my own case. It would, indeed, be idle to flatter myself that I had much

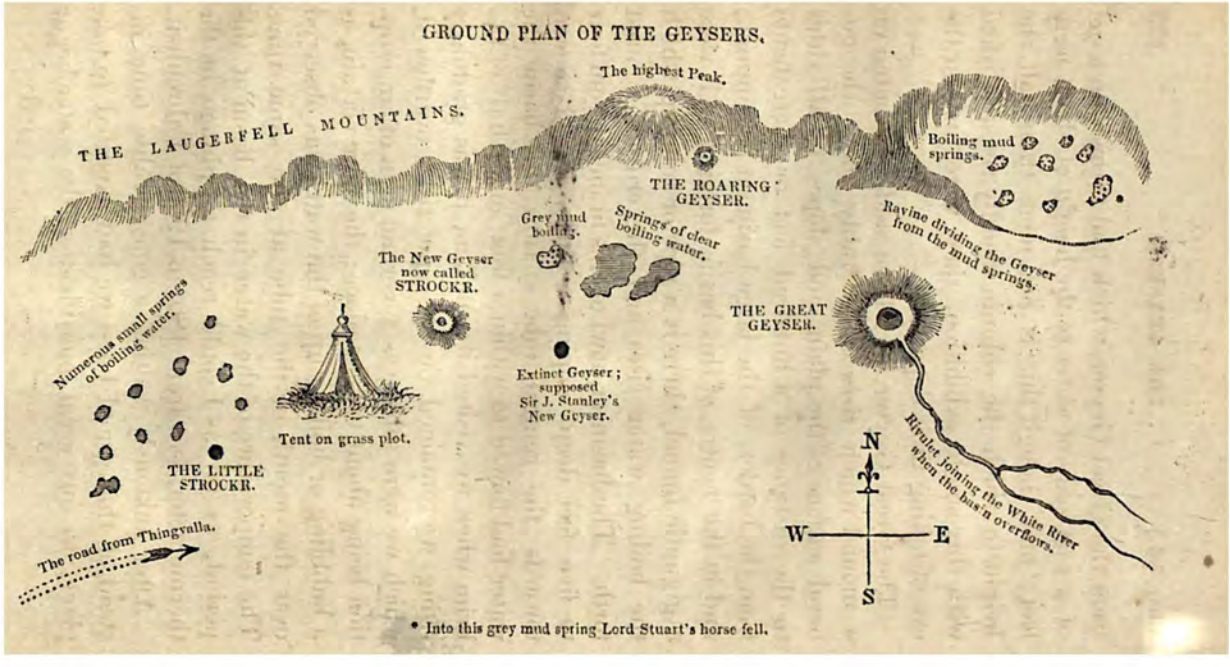
new information to communicate respecting these extraordinary fountains; but as a period of five-and-forty years has passed away since Sir John Stanley's visit to this singular and interesting country, I may perhaps be pardoned for going over the same ground with him, were it only for the sake of examining whether any and what changes may have taken place in the course of that period.

We were now arrived close upon the verge of that plain out of which these boiling springs issue. The moment we turned a projecting angle of the range of hills called the Laugerfell, along which we had been travelling all the way from Almannagaiaa, and entered the plain, we were at once in the midst of smoke and steam, rising above and around us, and of boiling springs and bogs of heated mud at every step we took. Our first object was to look out for some firm and dry spot on which we might pitch our tent, as close to the principal Geysers as possible; and while that operation was going on, we perambulated this extraordinary piece of ground, that seemed to be shaking and trembling under our feet, and below which we could hear a sort of murmuring or rumbling noise not unlike that of distant thunder.

In some places we found single detached fountains or jets throwing up steam mixed with water; in others several smaller ones grouped together emitting steam only. In one place, where a mound,

or oblate and truncated cone, of considerable extent, rose in a gradual slope out of the plain, the rumbling noise was loudest; and a large basin in the summit of the mound at once pointed out to us that this was that which, *par excellence,* is called the *Great Geyser;* but all above ground was still and quiet. The number, size, and position of the several springs on this small piece of ground, which does not exceed twelve acres, may best be collected from the sketch in the following page, laid down by the eye with the aid of a pocket compass, from every part of which is thrown out steam or water, or both; but in this sketch the principal boiling and mud springs only are laid down, those numerous holes or fissures that were emitting steam without water not being inserted.

It was about four o'clock in the afternoon when we arrived on the ground; and none but those who have witnessed the scene can appreciate the impatience we felt to be favoured with one of those grand exhibitions, which some few of our countrymen have seen with wonder and delight. But if we were doomed to experience a painful state of suspense, the party who had passed us on the road, and who had reached the spot a short time before us, were pretty much in the same state of anxiety with ourselves, waiting for a burst from some of the boiling cauldrons. Another party informed us that, after about twenty-four hours' expectation, they had been gratified with a splendid eruption


GROUND PLAN OF THE GEYSERS.
The highest Peak.
THE LAUGERFELL MOUNTAINS.
THE ROARING GEYSER.
Boiling mud springs.
Ravine dividing the Geyser from the mud springs.
Grey mud boiling.
Springs of clear boiling water.
The New Geyser now called STROCKR.
THE GREAT GEYSER.
Numerous small springs of boiling water.
Extinct Geyser; supposed Sir J. Stanley's New Geyser.
Tent on grass plot.
Rivulet joining the White River when the basin overflows.
THE LITTLE STROCKR.
N
W
E
S
The road from Thingvalla.
* Into this grey mud spring Lord Stuart's horse fell.

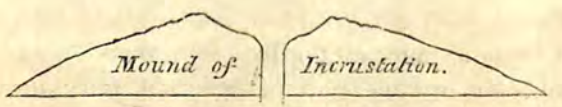
from the Great Geyser, which had thrown up a jet of a vast body of water to the height of about forty feet; and though this is not more than half the height to which the column usually rises, satisfied with this single exhibition, they were just on the eve of taking their departure.

The Great Geyser, as I have said, is situated on a mound which rises considerably above the general surface of the plain, and slopes on all sides to the distance of a hundred feet or thereabouts from the borders of the large basin on its summit; and in the centre of this basin, forming as it were a gigantic funnel, there is a pipe or tube up which the boiling water rises and the eruptions burst forth. The basin or bowl of this funnel is from four to five feet deep, sloping a little, like a saucer, towards the central tube. Into this basin the water had flowed to within a foot and a half of the brim when we visited it; and, as it was gradually rising, we remained on the spot till it overflowed, which we were told was a certain sign of an eruption being about to take place; the more certain, as a bubbling or boiling up of the water was observed over the mouth of the tube at the same time. The temperature of the water in the basin at this period, as far as I could reach to plunge in the thermometer, was from 180° to 190° of Fahrenheit.

After anxiously waiting a considerable time, instead of that grand burst we had expected to take place, to our great mortification the water began

gradually to subside, and did not cease to diminish till the basin was left quite dry. I had now, however, an opportunity of taking the dimensions of the basin and its pipe, the former of which was found from actual measurement to be fifty-six feet in the greatest diameter, and fifty-two feet in the narrowest, and the greatest depth about four feet. The shaft or tube in the middle, at the upper and shelving part, was found to be 18¼ feet one way, and 16 feet the other; but it narrows considerably at a little distance from the mouth, and appears to be not more than ten or twelve feet in diameter.

The Mound, Basin, and Tube of the Great Geyser.



Perpendicular Section through the mound, pipe, and basin.

I measured its depth on two sides: on one I found it to be sixty-seven feet, and on the other a little more than seventy. The sides of the tube are smoothly polished, probably by the constant friction of the water, which is also the case with the floor of the basin, whose surface is perfectly

smooth and even, and has the appearance, in parts, of agate, and is so hard that I was unable to detach a single piece with a hammer. It is difficult to imagine in what manner this capacious tube, perfectly perpendicular, has first been shaped, and equally so how the smooth crust with which it is lined has been laid on—whether at once, or by successive depositions of the laminæ of siliceous matter. The lining of the basin or bowl would appear to be of more easy explanation: the water remaining therein quiescent may deposit its silica undisturbed, but in the pipe of the tunnel it is always bubbling or boiling, sometimes higher, sometimes lower, or exploding steam and water. But after all, that which is the most difficult to comprehend is this—that the water of the Geyser is perfectly clear, and gives no deposite without the application of chemical tests, and then only in the smallest possible quantity: it may be kept for years in bottles, without depositing the least sediment.

It becomes a question, then, how such a quantity of siliceous matter is deposited, not only in the tube and floor of the basin, but also on its rim or border, which forms the highest part of the mound. The matter here deposited is abundant, and appears to be constantly forming; and as this rim is out of the reach of the hot water except in one spot, it would appear that this deposite is from the condensed steam or vapour, which is the more probable from the extreme delicacy of the efflo-

rescence. The siliceous incrustations that are here formed extend to the whole distance down the slope of the mound around the brim, and several yards below it. They consist of little tufts or knobs, grouped in such a manner as to bear a resemblance, in which all agree who have spoken of them, to the heads of cauliflowers; or the composition, but not colour, of the cockscomb, or amaranthus, may come as near to them. These depositions are of so delicate a texture, that we found it quite impossible to bring away any of them in their perfect state, without damaging the minute crystalline efflorescence with which they were beautifully covered; they generally, however, harden with time, and become a compact siliceous stone of a brownish tint, but white within. On one side of the margin of the basin, where there is a channel for the water to escape when it overflows, these siliceous incrustations, from the constant moisture of the steam, remain soft, and are crushed under the feet when trod upon, and will not bear taking up without falling to pieces. This delicate deposite is pure silica, and may with propriety be called, what it really is—siliceous *sinter;* or, which is but another expression for the same thing, siliceous *travertin;* the only difference of the substance well known under this name being, that the one in question is a deposition of flint, and the other of lime.

The stream of water that flows from the basin finds its way down the slope of the mound, and at

the foot thereof divides itself into two branches which empty themselves into the *Huit-aa*, or White River. On the margins of these little streams are found in abundance the most extraordinary and beautiful incrustations that can be conceived, which, like those on the margin of the basin, would appear to be owing to the steam and spray that accompany the water, rather than to the water itself. Along the banks of these occasional streamlets the grasses and the various aquatic plants are all covered with incrustations, some of which were exquisitely beautiful, but so delicate that, with every possible care, I found it was utterly impossible to bring any of them away in a perfect state to Reikiavik.

Every sort of adventitious fragment, whether of pieces of wood, bones or horns of animals, were here found in a silicified state, and among other things, by the edge of the stream, I met with a piece of printed paper which, with the letters perfectly legible, exhibited a thin plate of transparent silex, giving it the appearance of a child's horn-book, but the moment it was removed it fell in pieces. Previous to our departure the Governor had shown to me a worsted stocking which, by laying on the banks of this streamlet about six months, had been completely converted into stone, as had also a blue handkerchief, which exhibited all the cheques and colours of the original; and these were solid enough to bear handling, and as hard as silex itself. I must observe, however, that these streams are lined

with a white siliceous stone of a close compact texture, resembling pure white marble, which continues down to their junction with the Huit-aa.

We had shot some plovers and curlews on our way to this place, which we ordered to be boiled in the basin of the Great Geyser, and they were sufficiently cooked in the space of twenty minutes, the temperature of the water continuing to vary from 180° to 190° of Fahrenheit. The steam arising from this as well as all the Geysers is sensibly, but not very strongly, impregnated with the smell of sulphur; and our guides told us the birds would taste of it so strongly as not to be eatable: but whether our appetites were sharp, or our senses dull, we did not by any means find this to be the case, nor could we perceive the slightest taste of sulphur. At this time, however, I filled a bottle with the beautiful clear water of the Geyser, which at the moment certainly had a strong smell of sulphur; but though firmly corked on the spot, it had lost it altogether on my arrival in England, nor was there the least deposite either of that or of any other substance whatever, when submitted to chemical tests*.

These circumstances regarding the water of the Geyser are remarkable enough, but not to be compared with other strange properties of this and the neighbouring springs, which would indeed be most wonderful, if they were only true. Thus Horrebow

* See Mr. Faraday's Letter, p. 209.

relates, that if some of the water of these fountains be put into a bottle, a sympathetic motion is immediately observable when the water of the fountain begins to be disturbed, and it will then boil up two or three times simultaneously with the boiling of the water in the pipe; but that if the bottle be corked up the moment it is filled, no sooner does an eruption take place than the bottle bursts in pieces. This is something very much akin to the sympathetic feeling discovered a few years ago to exist in the present race of the golden pippin apple-trees, all of which thought it right to die when the parent trees, from which they had been engrafted, yielded up their vegetative powers and became leafless trunks,—to the great discomfiture of physiologists, and the amusement of practical horticulturists; but the notion took, and was the standard theory for a time, till it was ascertained that golden pippins still flourished, and that the old ones died without the young ones caring about the matter.

At a little distance from the Great Geyser we observed two pools of the most beautifully clear water I ever beheld, the surfaces scarcely disturbed with anything like ebullition, and a thin aërial vapour, hardly perceptible, rising just above the water, and then dissolving into thin air. On plunging a thermometer into one of these pools the mercury immediately rose to 200°: they are at least forty feet deep, for I am certain we could see down to that depth, and for aught I know to the

contrary they may be twice that depth. They are separated only by a narrow ridge or arch of a whitish stone resembling that deposited by the water or steam of the Geyser; and this appeared to us to be a bridge, under which the waters of the two pools communicate. In many places it was dangerous to approach within several feet of the margin, as the earth overhung the water and was hollow underneath, supported only by incrustations, which in some places descended like a wall down to the bottom as far as we could see into the pools: these were likewise white, and no doubt consisted of the same kind of siliceous deposit as that near the Geyser; but on looking at them obliquely, they exhibited below the surface a beautiful azure blue colour. Near to the margin of these clear springs were some small ones of mud of a deep red colour, whose temperature was a few degrees lower than the water of the clear pools*.

* Dr. Holland, in his MS. journal, which he has kindly lent me, thus describes this "singularly curious and remarkable fountain." "A basin, not less than twenty-six feet in length, and eight or ten in width, is filled almost to its brim with water, in a state approaching to ebullition. The appearances produced in the inside of this basin are highly beautiful. The water is extremely clear and transparent, and allows the eye to penetrate to a great depth along the perpendicularly descending sides, which are everywhere lined with an incrustation projecting outwards into a variety of forms. The basin is traversed about its middle by a narrow arch, appearing to be composed entirely of incrustation, but so slight as to render it dangerous, if not impossible, to cross it in this way. Neither description nor drawing are capable of giving a sufficient idea of the singularity and beauty of this spot."

While looking around us at the various springs, the fountains and fissures on this extraordinary piece of ground, we watched with much anxiety for the usual symptoms of an eruption from the Great Geyser; but none took place during the remainder of the day nor in the night. The basin again filled and remained full, and several times overflowed the margin: at such times a vehement ebullition was observable directly over the shaft, and once it rose with a jet to the height of three or four feet.

Early the next morning I stripped off my clothes to perform my ablutions and to shave myself by the margin of the basin, but in the midst of the operation I felt a sudden motion of the earth, and a rumbling noise beneath resembling somewhat the crashing noise of a large body of ice breaking up in a thaw; and the water at once overflowed the basin. I had a narrow escape from being drenched with scalding water of the temperature of about 190° of Fahrenheit, but still no eruption took place. I observed on this occasion, and afterwards, that four or five ravens came and perched themselves on the rim of the basin on the leeward side, evidently enjoying the steam as it rolled over them.

The water having again subsided, I next visited an aperture close to the hill, to which my attention had been drawn by the constant noise that was made by the steam it was emitting: it was quite different from that of any other of the fountains,

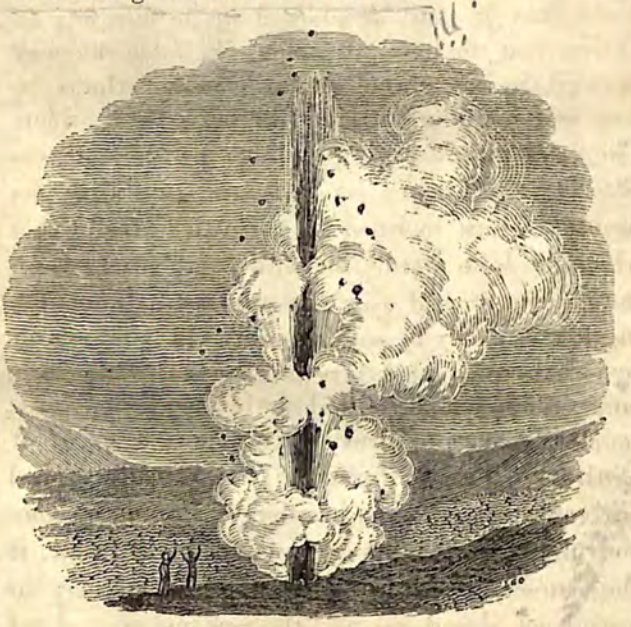
and the noise resembled that, only louder, which is made when the steam is let off from the boiler of a steam-engine. On a closer approach to it, a constant rumbling noise was heard immediately below it, and apparently at a very deep distance from the surface of the earth. From its situation and its height on the side of the hill, above the ordinary height of the other springs, and particularly from the violence with which the eruption of steam took place, I had little doubt of its being that same chimney, from this great subterranean laboratory, which Sir John Stanley has designated by the name of the *Roaring Geyser*, though during our stay it only emitted steam and no water, but never ceased making a roaring noise, and sending out volumes of steam. This partial change in its character may easily enough be accounted for: large fragments of rock had fallen into its orifice from the impending side of the hill, and so completely choked it up, as no doubt to have diverted the water into some other channel, while the steam continued to find its way through the interstices between the fragments of rock.

The obstinate Geyser, to our continued mortification, still remained tranquil during the whole of this day, with the exception only of two or three occasional ebullitions, of from four to five feet in height, each of which was preceded by the usual rumbling noise below the surface. Towards the evening, however, our attention was called to another quarter of these Phlegræan fields, where

a large opening or tube was observed, the margin of which was almost even with the general surface, the small mound and basin being scarcely discernible. We had previously noticed this in a perfectly tranquil state, and doubted whether it was an old worn-out geyser or a new one. We could perceive, at the depth of about twelve or fourteen feet, water in a state of ebullition, but without any apparent intention of rising higher. The circumstance, that now attracted our attention, was that of observing our guides digging up and throwing into the orifice large masses of peat or turf. The guides seemed to think that, by such provocation, they might succeed in bringing on an eruption; and as this was a wished-for event, we all lent our assistance in heaving in turf and peat in large quantities; and sure enough the boiling fluid, as if filled with rage and indignation at such treatment, burst forth almost instantaneously, and without giving the least notice, with a most violent eruption, heaving up a column of mud and water with fragments of peat, as black as ink, to the height of sixty or seventy feet, and continuing to do so for eight or ten minutes, when it subsided, and all the water sunk into the shaft, where it remained in a tranquil state at its former depth*. The masses

* The violence of this Geyser is well described by Dr. Holland:—"The scene," he says, "was a wonderful one: we saw before us a solid massive column of water and steam rising from the ground with immense impetuosity, violence, and noise, to a height of not less than seventy or eighty feet. Nor was this a momentary

of turf had been completely shattered to atoms, and dissolved as it were in the water, which did not recover the usual transparency of the geyser waters when it ceased: the fragments of turf in descending fell back into the shaft.



Black Eruption of the Strockr.

The guides remarked that this was the first

appearance: the water, indeed, which at first formed a large part of the column, gradually lessened in quantity, and in a few minutes almost wholly disappeared. But the impetuous rushing forth of the steam was increased by the removal of the superincumbent pressure, and it burst out with a violence which seemed to tear up the very earth through which it passed."—*Dr. Holland's MS. Journal.*

time this geyser had played for upwards of a month, the Prince of Denmark and his party having choked it, by throwing in a quantity of large stones. In a comparatively small aperture like this, as in the Roaring Geyser, there is little doubt that it may be choked up by heaping in stones, and that steam only will force its way through the water, though this would perhaps be done at the risk of blowing out some fresh orifice. The name given to this geyser by the Icelanders is *Strockr*, the shaker, or agitator; and from its position I am inclined to think it must be that which Sir John Stanley has called the New Geyser; but the rim or wall which he mentions as surrounding it can hardly be said to exist. It is worthy of remark, however, that there is close to this geyser an empty shaft, which emitted neither steam nor water, round the margin of which there was a ridge of earth and deposit forming a kind of wall; and I can see no reason why, in such a situation, by some convulsion or breaking down of the earth below, in the course of forty-five years, the old one may not have been closed up and the new one opened out. Sir John Stanley, indeed, observes that, before the month of June, 1789, the year he visited Iceland, his New Geyser had not played with any great degree of violence, at least for a considerable time; but that in the month of June this quarter of Iceland had suffered some very severe shocks of an

earthquake, and that it was not unlikely many of the cavities communicating with the bottom of the pipe had been then enlarged, and new sources of water opened into them. There seems to be no reason why these boiling fountains, like most volcanoes, should not lie dormant for a time, or change the place of their eruption, just as the pouring lava forsakes the old volcanic cones on the summits, to make itself new ones on the sides, of the mountain, supposing the proximate agent of both to be the same.

While we were looking at the exertions of this violent geyser, most properly so called, as the word *gys** implies to rush out with impetuosity, our attention was attracted to another little roaring fountain not far from us, throwing out immense volumes of steam, but the small jets of water did not mount higher than three or four feet: they were, however, so constant and so regular, that we were induced to time them; and we found that at intervals of between twenty and thirty minutes we were quite sure of having a burst of steam and water, each of which rarely continued above four minutes.

The extraordinary regularity of this little foun-

* The bishop or rector of Skalholt told Sir Joseph Banks that it was derived from *giosa—emovere, ebullire.* It is so, but the derivation is not obvious. The verb is pres. *gys*, pret. *gaus*, inf. *giosa.—Dictionariolum Islandicum Georgii Hickasii*, &c.

tain, so different from the Great Geyser or the larger Strockr, would almost lead one to conclude that it must have a steam apparatus of its own wholly distinct from any other. This "wonderfully amusing little fountain," as one of our travellers has appropriately called it, is named the *Little Strockr*. It plays through a small tube incrusted with stone like that at the bottom of the basin of the Great Geyser, from whence its antiquity may be inferred; for it cannot be imagined that a siliceous coating of this kind, deposited by water in which silex is with difficulty detected, and where the rush of it is almost incessant, could have assumed so solid a texture in a short space of time. The Little Strockr is situated at the head of a group of small springs, not fewer than a dozen, two of which only threw up water, and these not higher than two or three feet, something resembling the jets that may be seen when one of the fire-plugs in the streets of London is drawn out; but all of them threw out steam constantly, as if they had been intended as so many safety-valves: the temperature of these in general was as nearly as may be 210°.

Just under the Laugerfell hill, and from the sides of which I have supposed the Roaring Geyser to have been choked up, are a great number of mud springs, some of a red colour, some grey, and some brown, the general temperature being about 195°, out of which very little steam

was observed to escape. There were so many of these holes about the place, and the ground seemed to be so tender, that it was exceedingly unpleasant, if not dangerous, to remain long upon it: they are separated from the mound of the Great Geyser by a small ravine, the side of which next to the mud springs was composed of argillaceous earth or bole tinged with a yellowish or ochre colour—apparently a kind of ferruginous clay. The sloping descent from the edge of the basin formed the termination of the opposite side of the ravine.

This day, the 4th of August, as well as the former one, passed over without any fresh symptoms of an explosion from the Great Geyser. Annoying as this was in the extreme, we had so much set our minds on an exhibition of its powers, as to come to a determination not to quit the spot till we had received that gratification, though we had very nearly got to the end of our provisions without the means of recruiting them. A Norwegian servant of Mr. Knudtzon was as anxious as ourselves—indeed, so much so, that he sat up all night—and fortunately he did so, for about three o'clock in the morning, when we were fast asleep, having been kept awake the greater part of the preceding night by the rumbling noise under the earth at different periods, he hastily entered the tent, and said that, from the incessant noise and the violent rushing of the

steam, he had no doubt an eruption was about to take place. We were of course instantly on our legs; and just as we arrived at the spot, a few jets were thrown up to no great height, and we were once more making up our minds to another disappointment, when suddenly, as if by a violent effort, the shaft discharged a full column of water and steam, the former mounting in a grand mass to the height, as we estimated it, of between seventy and eighty feet. I must observe, however, it is but an estimate, as the rolling volumes of steam generally enveloped the column of water, and accompanied it to the very highest point, so that it was not easy to get a fair view of it, much less to measure it with any degree of certainty; but I feel pretty confident that I have not overstated the height. I may here observe that these rolling clouds, which in common parlance I have called steam, are not that pure unmixed steam which is constantly converted into moisture, and vanishes when it escapes into the open air, like that which is let off from the boilers of steam-engines, but is here accompanied by a kind of smoke and spray from the boiling water that require some little time to melt away and leave the atmosphere clear.

No sooner was the eruption over, and the water had subsided into the shaft, the steam continuing to arise, than the birds of Odin made their appearance, and perched themselves on the margin

of the basin on the leeward side, while we were standing on the opposite margin not twenty yards distant. I could not learn from our guides that any sacred character was attached to this bird, but as already stated, it is considered as a bird of ill omen. Their remarkable confidence in man may probably be taken as a proof that they are not molested by him. As a further proof of this, one of our party sent a ball through one of a large group assembled on the beach of Reikiavik, which had shown great confidence, but after this circumstance they avoided us in such a way that it was quite impossible to come near them. The farmers watch their movements, but seem to be afraid to take measures for destroying them, and yet they are among their greatest enemies: they are always on the watch during the lambing season to pounce upon and carry off the young lambs; in the winter especially they hover over the farm-houses, seizing everything they can lay their claws upon, and will not be driven away—indeed, they sometimes hovered over us in such a manner, as if they were only waiting an opportunity to pounce upon us. The Icelandic raven is a very powerful bird, much larger and stronger than those in the more southern parts of Europe.

Sir John Stanley has observed that, when he was on this remarkable spot, the eruptions of the Great Geyser took place every two hours. When the one

I have spoken of ceased, it was four hours before we had the satisfaction of witnessing a second, and that only rose to the height of some ten or twelve feet, and continued only about a minute, when the water subsided almost immediately. An hour after this we had a third, which ascended probably to the height of thirty feet, and this may have continued to act for about ten minutes; two hours after this, that is to say about eleven o'clock, the usual rising of the water in the basin, and the boiling up of that in the shaft, were observed, and a fourth eruption speedily followed, the water being forced up to the same height or thereabouts as the last.

While contemplating this grand exhibition of nature, my mind, as if by an involuntary impulse, seemed to carry me back to the period, now more than sixty years ago, when the late Sir Joseph Banks was standing perhaps on the very spot on which I now stood, in wonder and admiration of this grand phenomenon; and from him, by a natural transition, I had in full recollection the splendid print and drawings which Sir John Stanley had the kindness to show me in London previous to my departure. I was exceedingly desirous of transferring to paper something that might bear a resemblance of this eruption of the Great Geyser, but failed to succeed to my satisfaction: indeed, I considered it impossible

to fix its features on paper, as they are constantly varying, sometimes the whole column of water being completely hidden from top to bottom by the clouds of steam and vapour that envelop it, sometimes but partially hidden, and the colours constantly changing their hues as the sun or the clouds intervene.

The annexed sketch is the best representation I am able to produce, and it is but fair to confess that it was done chiefly from the recollection of an object which is not easily nor soon effaced from the memory. The beholder is in fact astounded by the incessant noise and rapid motion of so vast a column of water darted with so much violence and velocity into the air, and is quite unprepared to give anything like a faithful sketch of the infinite changes of form and colour which both the water and the steam assume. The picture given by Sir George Mackenzie exhibits one great mass of steam only, without any appearance of water, from which I judge he must have witnessed it on a calm day.

Our curiosity being now pretty well satisfied,—our provisions nearly exhausted,—ourselves and our people not a little fatigued by a three days' journey, and two nights spent amidst the boiling cauldrons and the steam of these Phlegræan fields,—we made up our minds to sound a retreat, and bend our steps homeward; the bishop's son

and his party set us the example by moving off first.

I felt, however, a very strong desire to ascend Mount Hecla, which stood before us with its three-coned summit buried in snow, as majestic as the three-forked Parnassus. Unwilling as I should have been to part from my companions, nothing prevented me from putting my wishes into execution but the utter impracticability of doing so, as it could only be accomplished by proper preparations and skilful guides to be provided at Reikiavik. In my anxiety to pursue my object, I had forgotten that the last loaf of bread had been consumed before we left the Geysers. After all, there is no great wisdom, perhaps, in courting both toil and danger, by clambering up a mountain buried in snow, where nothing else is to be seen. The people in the neighbourhood, it seems, discourage every one from attempting it. When the French doctor (mentioned in the introductory chapter) made the attempt, he was told that it was the entrance to the infernal regions, and that the devil was busily employed in handing down the souls of all those who had fallen in battle. Sir Joseph Banks was told that the mountain was guarded by a number of strange black birds, resembling crows, and with beaks of iron, with which they would receive, in a very ungracious manner, any one who might presume to infringe upon their territory. Sir Joseph found the mountain surrounded, as the

Frenchman says, for two leagues, with scoriæ, pumice-stone, cinders, and ashes. On reaching the summit, which was calculated, from the state of a barometer made by Ramsden, to be five thousand feet *, the cold was extremely severe, and the party had their clothes covered with ice in such a manner that, to use his own expression, "our clothes resembled buckram." As there was nothing to see, there was no object to induce them to prolong their stay. Sir George Mackenzie climbed up amidst fog and ashes; got to the top, where he found a small crater filled with snow; looked round when the sky cleared up a little, and then came down again. All things considered, therefore, I may, perhaps, console myself for my disappointment, with the reflection, that I have lost but little pleasure, and escaped much fatigue; but still it would have been something to say, "I have been to the summit of Hecla;" and it might have furnished a few more pages to my book.

Having now given a brief description of what we saw respecting the plain of the boiling fountains—which, to use the words of Professor Bergman, are the most extraordinary which have hitherto been discovered in the known world, or, as Dr. Holland expresses himself, "the most remarkable mineral-water in the world is that of the

* Subsequent observations give the altitude at something less than 4500 feet; but the measurement made by Sir John Stanley gave only 4300 feet.

most wonderful fountain the Great Geyser,"—I shall proceed to make a few observations that have occurred to me on this interesting subject. There seems to be a prevalent notion that the impelling force of the Great Geyser, be it what it may, (and no one will dispute what it is,) has been for some years past on the wane. This is a point not easily to be determined without more frequent and closer observations than appear yet to have been made and recorded. From the height of the jets no inference can be drawn, as they are very different on different days, and at different times on the same day. A comparison, therefore, of the number of times it may have played in a given number of hours, or of the different heights to which the column has been observed to ascend by different spectators, would prove but little or nothing. Were we to take these grounds as conclusive, the inference to be drawn from our late experience, as compared with that of former travellers, would be in favour of the opinion of its diminished powers. And then with regard to the height of a jet, no two persons, viewing it at the same time, will agree. It is, in fact, next to impossible to estimate by the eye with anything like accuracy the height of a fluid column in a constant state of vacillation. All our party, it is true, agreed upon one point, and that was, that the strongest eruption of the Great Geyser,

at its very highest pitch, did not throw the column of water above eighty feet; while, by other travellers, it is stated to have been as under:—

	Feet.
Olafsen and Povelsen	360
Von Troil	92
Sir John Stanley (by a quadrant) .	96
Dr. Hooker	100
Sir George Mackenzie	90
Mr. Henderson	150

Of the first, being a gross exaggeration, and indeed impossible, nothing more need be said; and the last I think is not very probable. Dr. Hooker may have been deceived in estimating the height, concealed, as the greater part of the jet almost always is, by the volumes of steam that are carried up with it. By taking a mean of the remaining three, we have $92\frac{2}{3}$, or, if our estimate of 80 feet be taken into the account, we have 86^2 for the average height, which may perhaps be about the truth. The fact however of Mr. Baine, who accompanied Sir John Stanley, having ascertained geometrically, and with great care by means of a quadrant, the greatest height to have been 96 feet, would seem to put conjecture out of the question. I make use of the strong term "impossible" as to the estimate of Olafsen and Povelsen, advisedly; for, although I am not aware of any theory in hydrodynamics by which the limit of such a jet may be assigned, yet

I understand it has been pretty well ascertained, by direct experiment, that no momentum given to a column of water, issuing from a pipe, will throw a perpendicular jet to the height of ninety feet: that at Versailles, the *Grandes Eaux* play only to the height of eighty feet; and that, by an experiment made of applying a double force, they could not succeed in raising the column to ninety feet.

Three things would seem to operate against an ascending column of water—the increased resistance of the air from its increased velocity or momentum;—the separation of the column into spray as it ascends;—and the gravity of the column itself, each stratum of water pressing on that below it. But if practice has established the fact that ninety feet is to be considered as the maximum, what are we to say to the jets of the New Geyser, the greatest elevation of which, as stated to have been observed by Sir John Stanley, amounted to 132 feet?—only this, that as it was not ascertained, like that of the Great Geyser, by the quadrant, the small diameter of the jet, and its extreme rapidity dividing the column towards the upper part into threads, may have led to an inaccurate estimate. But Sir John Stanley has himself solved the question. He says, speaking of the Geysers, "Nature nowhere offers objects bearing a resemblance to them; and art, even in constructing the waterworks of Versailles, has produced nothing that can at all illustrate the magnificent appearance of the Geyser." It is most true, as

he further says, that "imagination alone can supply the noise and motion which accompany such large bodies of water bursting from their confinement, and must be left to paint what I have not been able to describe—the brilliancy of colouring,—the purity of the spray,—the quick change of effect,—and the thousand varieties of form into which the clouds of steam, filling the atmosphere on every side, are rolled incessantly *."

If it be true, as Von Troil has stated, that it is very common for some of the spouting springs to close up, and others to spring up in their stead,—if, as he is disposed to think, all the springs within the circumference of the plain, out of which they rise, proceed from one and the same reservoir (and as all of them are constantly emitting steam like so many safety-valves of a steam-boiler), it is not at all improbable, if his theory of one large cauldron be the true one, that the strength and the frequency of the jets of the Great Geyser should be diminishing, each little tube and every fresh aperture carrying off a portion of the steam. But as far as our observation went, we could not discover any correspondence between the eruptions of the different springs; though we certainly did observe that, whenever one of them was feeble, it pervaded the whole, and that, previous to the eruptions of the Great Geyser, all the dimi-

* An Account of the Hot Springs of Iceland, p. 44.

nutive ones were in a state of great activity, as if the fires had been stirred up for some grand occasion.

If, however, we are to imagine that all these Geysers and apertures, that constantly throw out volumes of steam, communicate with one great reservoir of water from which the steam is produced, the escape of this steam through so many apertures must cause it to act with less pressure on any one of them, and probably less frequently in propelling the jets up the pipes or shafts; and we may, perhaps, consider these numerous *safety-valves* to be the means of preventing a catastrophe that the choking up of some of the larger ones might bring on at any time—namely, a general explosion of that perforated and tremulous crust of earth out of which they all rise, and convert the whole area into one great pool of boiling water.

The violence of the eruption of the Strokr, when choked up with peat and sods, might have been exerted on some other place, had not the force of the steam been sufficient to clear the passages.

The Roaring Geyser of Sir John Stanley, though it still roars, as I have said, like the bellows of a blast furnace, has been so completely choked by large stones and earth falling into it from the mountain above, that it has ceased to throw out jets of water; and if stones and earth continue to fall into it, the violence of the steam must make for itself a passage in some other

quarter. I speak of steam as the proximate cause of all these extraordinary eruptions of hot water; indeed, it cannot be mistaken for anything else. From the moment the spectator arrives on the ground, he finds himself surrounded with steam; he sees it—he hears it—he feels it,—and he smells it—not strongly, however, but sufficiently to be satisfied that it is impregnated with a small portion of sulphur.

The projectile force given by the elasticity of steam is much increased by the direction, the smoothness, and the form of the cylinder. How these qualities were communicated, or what is going on below the surface, we may indulge in ingenious conjectures, but can know nothing certain. We may draw plans and diagrams on paper, placing pools of water here, and subterranean caverns there, for the reception of steam; —we may imagine conduits to convey a supply of the former from above, and cracks and chasms in the rock for the passage of the latter from below,—and all these, fitted in all respects to produce the effect that we see above ground;—but if it be asked where the fire is, that produces all the steam and the boiling water, no one will be hardy enough to assign a local habitation to that element which Sir Humphry Davy has called "an unceasing fire in the laboratory of nature,"—that first operative cause which heaves up mountains—compels them to vomit forth red hot melted lava,—

rends open deep chasms in the surface of the earth, and supplies the fountains of the Geysers with boiling water and steam.

One thing is quite certain,—fire cannot exist without fuel, and fire consumes the fuel that feeds it. Where, then, are we to look for that supply of fuel that has kept the Geysers playing, as we know from historical records, six hundred years, and, for anything that can be known or imagined to the contrary, may have been playing for ten times that period? A question may here be raised, whether the same fire, that supplies steam for the Geysers, melts the streams of lava that flow from Hecla? The presumption is against it. Hecla has been perfectly quiet for more than sixty years, and remained tranquil more than seventy years before the last eruption in 1772. Besides, there are multitudes of volcanoes that have for ages been wholly extinct, the supply of fuel being probably exhausted.

From whence then, it may again be asked, can an apparent perennial supply of fuel possibly be derived to support a conflagration of so many hundreds, perhaps thousands of years, such as that which affords steam for the Geysers? To what other source can we have recourse, than to that central fire of the old philosophers, which the new ones, in their superior wisdom, thought fit to extinguish, but which has once more been revived by the late eminent Sir Humphry Davy?—by him who, after deep and mature

reflection, was induced to abandon those chemical agencies, on which he had once relied—of the newly-discovered metals of the earth, the alkalis and the pyrites—and, in lieu of them, to adopt a strong opinion, amounting almost to a conviction, of the existence of a fluid central fire "in the laboratory of nature?" But a truce to all speculation, which leads to little or nothing that is satisfactory.

Just as I was on the eve of departure from Liverpool, I received a letter from my father, inclosing one to him from Mr. Murchison of the Geological Society, of which the following is an extract:—

"11*th June*, 1834.

"I have for some time intended to call on you to request you to mention to your son, who is going to Iceland, how much we geologists desire that he should furnish us, upon his return, with some correct information respecting a very singular accident, an account of which I received from Lord Stuart de Rothsay. When Lord Stuart was in Iceland last autumn, one of the horses of his followers was *lost*, and his disappearance never could be accounted for. Since his return to England his Lordship had a letter from the Governor of Iceland, acquainting him with the extraordinary fact, that *the bones of the said horse had been ejected from the Geysers;* into which it is therefore clear he had fallen unperceived by the attendants.

"If this be not a fable, it would be very desi-

rable that Mr. Barrow, Junior, should bring home any portion of these bones which he may be able to procure, and present them to the Geological Society, there to remain as evidence of the effects produced upon animal and bony matter when boiled in a subterranean cauldron of liquid silica."

I lost no time, on our arrival, in communicating the contents of this letter to Mr. Krieger, who told me it was all a mistake; that he only said the horse had tumbled into one of the springs, and that part of its leg and hoof had been seen by a peasant. It appears, indeed, that he scarcely said so much: the letter of the Governor, an extract of which Lord Stuart has kindly communicated, merely says—"On a trouvé un pied du pauvre cheval que vous avez perdu auprès du Geiser; il a été abîmé dans l'eau bouillante." I was quite satisfied, however, with the Governor's answer, that it "was not a fable," and prepared accordingly to make further inquiries.

We happened to enter upon the plain of the Geysers just as a Danish gentleman of the name of Smith and his party were leaving it. Being at Reikiavik when the subject was mentioned, he pointed out to me, as at least a curiosity, the boiling mud pit into which Lord Stuart's horse had fallen, and which was shown to him by the very guide who had accompanied his Lordship, and was now with the party. It was one of those cauldrons of a

temperature nearly at the boiling point, the water of which was so much thickened by grey-coloured mud, as to be kept in a bubbling state by the steam forcing itself through it. To attempt to probe for the horse would have been absolute nonsense; indeed, we had nothing with us prepared for such an operation, and being now a twelvemonth since the animal fell in, his carcass must long ago have been boiled down into gelatine.

The peasant's account of the horse's leg is very generally believed—indeed, the only wonder is, that horses, sheep, and cattle do not more frequently fall into these pits, enticed by the luxuriant herbage that is generally growing round them: we are told indeed that at Reikiaverf, where one of the springs bears the name of Oxa-hver, (the name derived from the circumstance of an ox having fallen into one of the boiling apertures,) the said animal, after a short interval, was thrown out by the Oxa-hver. The writer supposes it not very credible that he should have fallen into *one*, and have been thrown out from *another*, but thinks it by no means improbable that he may have fallen into this identical Oxa-hver, and have been ejected again by the following eruption. But supposing it to be so, it is a matter of great doubt whether, instead of a silicified skeleton of an ox, the whole of the animal would not, in a very short space of time, be stewed down into that kind of gelatine from which our *portable soup* is made.

I brought home a small bottle of water from the

Great Geyser which, in spite of Horrebow's sympathetic commotion, I immediately corked up, and found no difficulty in keeping it quiet. Finding it, on my arrival, perfectly clear, without any sediment or smell of any kind, I requested Mr. Faraday to have the kindness to analyze it, which he immediately did; and as some one may wish to compare the result of this analysis, with that of Dr. Black, of the water from the same fountain, nearly half a century ago, the following letter from Mr. Faraday may satisfy him on this point:—

"*Royal Institution, 9th September,* 1834.

"Dear Sir,—I have been engaged in examining the water you sent me from the Geyser, but found myself sadly limited by the smallness of the quantity; there was not more than six ounces of it altogether.

"This water had none of the smell of sulphur of which you spoke, nor could I find any traces of deposited sulphur, neither had it deposited any thing apparently since you put it in the bottle, but was perfectly clear; it had a little colour, but I suspect that was derived from the cork.

"The water is distinguished, even in its present state, from other waters, by containing a peculiar combination of silica and the alkali, soda. When the water is evaporated, this compound is in part decomposed, the silica is deposited in an insoluble

state, the alkali is set free, being probably assisted in this change by the carbonic acid of the atmosphere, and being dissolved in, and removed by, water, is found in considerable abundance.

"The silica which is thus deposited is not merely insoluble in water, but in sulphuric, nitric, or muriatic acid also, and quite resembles the purer parts of that which you sent me as deposited at the spring. The alkali is in such quantity, that when washed from the silica by distilled water, and diluted, until of the bulk of the water before evaporation, it readily affects turmeric paper. The original water does not immediately and sensibly affect the test paper, but if it be heated, in the air at least, it gradually affects the paper when left in it. All the effects show that the silica for the time neutralizes in part the alkali, and that the latter shows its powers as the former is by the evaporation gradually separated from it.

"The deposits are all essentially siliceous: most of them have the silica in combination with water as a hydrate, and it is probable that a little alkali is contained in them. The red portions are produced by oxide of iron, derived, I believe, not from oxide of iron contained originally in the waters of the Geyser, but from the action of the alkali precipitating some chalybeated portions of water which it meets with in its course. I think you said that the red deposit does not occur at the spring, but at the place where the waters run into the river.

"The waters contain, besides silica, &c., sulphate and muriate, probably of the alkali soda, for there is no sensible portion of lime present; but these, or at least the muriate or the chlorine is probably in a peculiar state of combination, for when nitrate of silver is added to the original water, *i. e.* before the silica is separated from it, it causes but a very slight precipitate; and yet the addition of a little nitric or sulphuric, or even acetic acid, produces an abundant precipitate of chloride of silver. This is an effect which we should not expect, and shows the interference of something for a time, which interference is removed by the presence of the acids. The quantity of water was so small, that I was not able to satisfy myself of the exact nature of this action.

"The specific gravity of the water is 1000·8.

"I presume that the deposition which takes place from the waters at the spring is quite of the same nature as that which occurs on the evaporation of the portion you brought away; the water coming from the earth in its fresh and hot state fully saturated with silica, and holding more of it than it can retain when it cools and is exposed to the air. I should not think it would be an impossible thing by art to imitate the whole effect.

"With regard to the surturbrand, I have nothing to say about it which is not well known, and I believe published. The specimens of the deposits I

shall have the pleasure of laying before the next Board of Managers, and in the mean time beg to return you our thanks for them.

"M. FARADAY.

"John Barrow, Jun., Esq."

It may be of service to future visiters if I here observe that our guides and people, and indeed the party of the bishop's son, were more comfortable in their sleeping tents than we were, they being simply a canvass covering over two poles and a cross pole, very low and warm, and much better adapted to the country than our tall one, with all the machinery of lines and pins; they are also much more convenient for carriage which, in a country like this, where everything must be slung over a horse's back, is an advantage of no small importance. As to our horses, they were turned loose with shackles on their legs. But the Icelanders have a most curious custom, and a most effectual one, of preventing horses from straying, which I believe is entirely peculiar to this island. Two gentlemen, for instance, are riding together without attendants, and wishing to alight for the purpose of visiting some object at a distance from the road, they tie the head of one horse to the tail of another, and the head of this to the tail of the former. In this state it is utterly impossible that

they can move on either backwards or forwards, one pulling one way and the other the other; and therefore if disposed to move at all, it will be only in a circle, and even then there must be an agreement to turn their heads the same way.

In the evening of the day of our departure, on our return to Reikiavik, we took up our abode at the parsonage of *Middalr*, or rather in the church, for the priest's house was anything but inviting. The poor man came out to us to offer his services, and anything that his house afforded, which amounted to nothing more than some hard, heavy, and black rye bread and milk. The church was miserably small, dirty, and stuffed full of various articles; its dimensions were 25 feet 10 inches in length, the aisle extending 16 feet, and the width 10 feet 7 inches. It was even more crowded than that of Thingvalla, planks having been laid across the beams, which were only 5 feet 9 inches from the ground, and loaded with various articles, so as to serve for a store-room. The lumber consisted of all kinds of domestic implements, clothing, wool, and provisions: add to these, the aisle was already crowded with an enormous chest and a quantity of bedding, so that, with our saddles, trunks, and other baggage, we pretty well filled this little house of prayer. It was, indeed, a temple of the most humble structure and appearance; the door through which it was entered was just 4 feet 6 inches high, and of course it re-

quired us to stoop to enter it; but the poor clergyman was above six feet high, and, as our guide informed us, he was once considered as the finest man in Iceland; he was now, however, a complete cripple, and scarcely able to move about.

I paid this poor man a visit in his miserable dwelling, and found him stretched out on a pallet, or rather a sort of broad shelf, the only one in the room, which, with a small deal table and a couple of broken chairs, composed the whole of the furniture; the room, however, was wainscoted, and had a small window to admit a little light. We offered to send a surgeon from Reikiavik to give him some advice as to the treatment of his complaint, which, as far as I could collect, was a white swelling in the knee, but he declined it, probably on account of the expense. To see a poor man so circumstanced filling such a situation was quite deplorable.

I have no idea of what his establishment might consist, for the only creature that appeared, except himself and his wife, was of a doubtful gender, a creature of an amphibious nature which, from her dress, I at first took for a male, but from the appearance of the upper half of the body I soon discovered to be a female. Her nether clothing consisted of a pair of thick light-brown wadmal pantaloons, so light as almost to be the colour of the human skin, and so close that a tailor would call them a "tight fit." Such a being, large and lusty

partaking of the Hottentot form, habited in such a dress, brought involuntarily to my lips the

"Monstrum horrendum, informe, ingens"—

but there was no "lumen ademptum;" this was the only *breeched* lady I saw, and we will suppose that, in the hurry, she had left her gown or petticoat behind.

The little boy that attended our guides I found eagerly devouring a mess of porridge, which having finished, he went up to the priest lying in bed and kissed his cheek, the usual mode of expressing gratitude here, as a shake of the hand is in Norway. I gave the clergyman's wife a pair of scissars, and on departing we left a few dollars on the Communion table; and made, after this, all the haste to get away from this wretched dwelling and its apparently miserable tenants that our guides could or would exert.

It is a remarkable coincidence that the priest of Middalr, when Dr. Hooker was there, had a dislocated hip and an ulcerated wound. By the Doctor's account, his living was only worth twenty rix-dollars, or 4*l.* a-year; and he observed both him and two or three persons of his family eagerly picking up from the ground the heads and entrails of some fish, which the doctor's servants, in preparing for cooking, had thrown away. Why he should have been thus eager to pick up these remnants is the more unaccountable, as a short journey

either to Apa-vatn or Thingvalla Lake would have given him as much fine trout and other fish as his horse could have brought home. Of the general poverty of the clergy I had heard and read much; but nothing except sheer mismanagement could have reduced this poor man to such a degraded condition as is here stated.

We slept the next night, for the second time, in the little church of Thingvalla, and the following day arrived at Reikiavik, sufficiently fatigued, not having been in bed, nor in fact had our clothes off our backs, except to indulge in a hot bath at the Geysers, since we left the capital; but we were nevertheless highly gratified with our journey.

CHAPTER VII.

HAVNEFIORD AND BESSESTAD.

Cathedral Service at Reikiavik—Supper at Mr. Knudtzon's—Journey to Havnefiord—Wide extent of country covered with Lava—Various shapes and situations of—Situation of Havnefiord—Disappointment in not seeing the Sulphur Mines of Krusivik—Proceed to Bessestad, the only Collegiate School of Iceland—Some account of it—Salaries of the Instructors—Literature of the Clergy—The Sagas, Eddas, and Scalds—The Songs of, sought after by European Courts—The Visits of Scalds to the Court of England in the reigns of Ethelred and Alfred—Condition of the Clergy compared with that of the Peasantry—Number and value of the Livings — Studious habits of the Clergy—Example of Jonas Thorlakson—Church of Bessestad.

On the Sunday after our arrival at Reikiavik we did not fail to attend divine service in the Cathedral. It began at one o'clock, and lasted about an hour. The clergyman read, or rather chanted, some prayers from the altar, and afterwards preached a sermon from the pulpit, which he delivered with considerable energy, and to which the congregation, both male and female, appeared to listen with attention. Several of the people assembled joined occasionally in the chanting during

the service, but it was harsh and uncouth psalmody, and there was no instrument to accompany or modify it. The bishop took his seat in a separate pew close to the communion-table, which stood on a raised platform of some extent with railings around it, and several benches within, the occupants of which immediately rose on the bishop's entering: he took no part in the service. The governor of the island had also a large pew to himself in the gallery; the ladies were all arranged on one side of the church and the gentlemen on the other: somehow or other we contrived accidentally to get on the wrong side among the ladies, where, as no one molested us, we considered ourselves privileged to remain. Some of the elder and middle-aged ladies were rather oddly dressed in black clothes, with enormous white cockades or *plumes* of linen nodding over their foreheads, which, on leaving the church, were so blown about by the wind as to be very troublesome to the wearers, who were under the necessity of holding them down lest they should be carried away. On leaving the church, our guide to the Geysers told us that he had been doing his best in the way of singing, and hoped we noticed and approved of his performance.

In the evening we were invited to sup with Mr. Knudtzon at the new house which he had just erected at Reikiavik, and which it was his intention to inhabit the ensuing year on his return from Den-

mark. This wooden structure will be by far the most comfortable in the whole town, at least of those I have had the opportunity of seeing: it was built at Copenhagen, and seemed to be in every part admirably fitted and furnished. We sat down about twenty, and a very agreeable party it was: among the number was the governor of the island, but the greater part were Danish merchants residing at the capital. Some of the party favoured the company with songs, and one Danish gentleman was full of humour, and made those laugh who understood his jokes, which was not my case. In compliment to us Englishmen, the evening was wound up with "God save the King," in which every one joined; and although few, if any of them, knew the words, they all knew the tune, and the effect was equally good. The supper was such a one as we could scarcely have expected to sit down to in Iceland—well dressed, and the meat of every kind good; among other rarities were some ducks and geese split open and dried, which were very palatable. Every variety of wine was produced, and there was no lack of champagne; in fact, the Danish merchants import every luxury from Copenhagen, and I believe duty free.

We did not break up till a late hour—indeed, it was past midnight—and I had made my arrangements the moment all was over to ride to Havnefiord in company with Mr. Thompson, who is the

principal among the few Danish merchants at that place, my ulterior object being to proceed from thence on a visit to the Sulphur Mines of *Krusivik*. This gentleman is noted as the boldest and fastest rider in the country, so that I had the consolation of knowing at least that, late as it was, we were not likely to be long in reaching the end of our journey. After we were once fairly started, I soon found that he was fully entitled to this distinction, for it was quite surprising with what rapidity he trotted and galloped over the rough tracts of lava, familiar enough to him, but not very pleasant to one not accustomed to such rough riding: however I was obliged to follow as well as I could, and it fortunately happened that I was well mounted myself, one of the Danish gentlemen having very kindly lent me his own horse, which was far superior to the generality of the Iceland animals, and well adapted to perform the journey. It was dusk when we started, and nothing could be more dreary than our ride during this interval, but soon after one o'clock the day began to dawn.

Our route led us through an extensive and barren tract of lava, and we passed at the head of two or three inlets of the sea, the farthest of which forms the bay of Havnefiord. Our approach to this spot was through one of the most desolate regions I ever beheld—indeed, it would be quite impossible to picture to the imagination anything

more rugged, more forbidding, or more barren of all appearance of vegetable life—animal life being quite out of the question—than the face of the country was here, covered over with immense masses of irregular lava rocks, by which the traveller, at every step he takes, finds himself intercepted, and turned aside out of his direct path. These detached masses, closely bordering on each other, rise out of what, in Iceland, may be called a plane surface, to the height of ten, fifteen, or twenty feet, and even higher. They form, in fact, a complete labyrinth of lava rocks, and so circuitous are the paths carried zigzag among and around them, that, having witnessed their intricacies, I can well conceive the truth of the story told by Sir George Mackenzie of one of his party, who having laid down his great coat, and accidentally walked on a very short distance without it, was unable to retrace a single step in the right direction, and failed in his attempts to recover it, although he had not proceeded two hundred yards from the spot where it was deposited.

There was no appearance here of anything like a stream of lava, or what the natives call *steen-aa* (Stone-river.) These irregular and shapeless masses, which had evidently once been wholly or partially in a state of fusion, mostly indeed cellular and blistered in every part, seemed to have been upheaved out of the ground on the very spot they occupied; they were "without form and void," or

rather of every conceivable misshapen and fantastic form*.

The difficulty of accounting for these masses of lava scattered over a wavy surface of rocky ridges, where there is nothing near that wears the semblance of a volcano, and where, if there was, no stream of lava could run or reach the present position of these rocks—many of which, indeed, never can have been completely fused—is sufficiently obvious. The most probable conjecture one can form is—whether it be deemed philosophical or geological I know not—that a power or momentum acting immediately below them has forced them up on the ridges they now occupy—where, in short, the earth has burst open, and upheaved them in a half liquefied state.

* "To eyes unused to the sight," says Dr. Holland, "nothing can be conceived more singular than the aspect of this bed of lava. A vast confused mass of rocky matter, having a general elevation of level above the surrounding country, but thrown within itself into every possible variety of strange and abrupt shapes, is the general appearance presented to the sight. In following a narrow and rugged path across the lava, we observed numerous fissures, caverns, and hollows, some of them apparently the effect of cracking and sinking down of masses of rock, others much resembling craters from which the melted matter had flowed. The approach to Havnefiord is striking: high and rugged masses of lava concealed from us, until we were almost at the edge of it, a small and retired bay, at the upper extremity of which are situated fifteen or twenty habitations, constructed, like those at Reikiavik, of timber, but superior in general appearance to the houses of the latter place. This is Havnefiord."—*Dr. Holland's MS. Journal.*

Another conjecture, probably still less philosophical, is that of their being discharged from volcanic bombs, which one has sometimes heard of; or, which I suppose amounts to the same thing, have been shot out, red hot but not melted, from the craters of some of the cone-shaped protuberances, which were visible at no great distance to the southward.

There are no mountains, nor even hills of such high elevations as deserve the name—in this neighbourhood—none that, supposing them to be of volcanic origin, could have sent forth a stream of liquid lava that, by any possibility, could have reached their present situation. There is but one other conjecture I can venture to throw out, and that is, that these enormous masses may be the remains of small broken down cones that have partially sunk into their craters, as we had occasion to see on our way to the Geysers.

Dr. Holland, in his account of the Mineralogy of Iceland, seems to countenance the opinion of these masses having been thrown up on the very spot they occupy, observing there was one formation of lava which had every appearance of not having flowed. Speaking of these masses of lava, he says:—"It was heaved up into large bubbles or blisters, some of which were round, and from a few feet to forty or fifty in diameter; others were long, some straight, and some waved. A great many of these bubbles had burst open, and displayed caverns of considerable depth." I

did not see any of this *cavernous lava,* but from a drawing of one of these hollow blocks, which Dr. Bright was kind enough to show me since my return, its blistered cavity, and confused or imperfectly fused shell, would seem to indicate that the feeble force of the igneous action of the steam or gas had but just been sufficient to heave it above the crust of the earth. This supposition would appear to afford a better solution of the difficult problem of accounting for those blocks of lava that are perched on high ridges, than that given by Sir George Mackenzie, who imagines this lava to have flowed from the lower ground, and calls it the "ascending lava." He says—"It is caused by the formation of a crust on the coating of the surface, and a case or tube being thus produced, the lava runs in the same manner as water in a pipe." This solution however is, to me at least, quite incomprehensible. The external air will unquestionably form a crust on the surface of flowing lava, within which it may be confined while in its *descent;* but would such a crust be able to resist the pressure of a column of melted lava in its upward *ascent*—if it could be supposed that, inverting the order of Nature, the lava should run *up hill,* before any "pipe" could be formed? It is pretty clear that when the stream once got to the bottom it might create itself into a hill *there,* but would never run up one already made.

I know not whether the lava that surrounds the

little harbour of Havnefiord be peculiar to Iceland, but I have not found any description in other volcanic countries to accord with the scene of ruin and desolation that here presents itself. The Icelanders pretend to say it is the most ancient lava on the whole island, but of this they can know nothing but what their historical sagas inform them, and which carry back the real records of the country at least to the beginning of the eleventh century. This part of the island, from Hecla to the Snæfell Yokul, was that however which received the first brave emigrants who fled from the tyranny and oppressions of Harold Harfager; but it is not described by them to have worn the same desolate, the same dreary appearance, nor the same barren aspect which it now does.

After winding our oblique way for some little

Approach to Havnefiord.

time through this labyrinth of lava, the blocks of which increased in size, and looked more horrible as we advanced, we came at length upon Havnefiord, a little port that is situated at the foot of one of the highest and most compact ridges which completely protects it from the north, and over which the tops of the houses are first seen just peeping above the black and bleak summits.

It was broad day-light when we arrived, after a ride of about two hours. Mr. Thompson kindly gave me a bed at his house which, like the rest of the Danish houses on the island, was constructed of wood, and in all respects comfortably fitted up, and furnished in good taste. There were three other Danish houses in this little secluded spot, and a cluster of huts similar to those near the beach at Reikiavik. The whole population was stated at about one hundred persons. The natives are partly employed by the merchants and partly subsist by the fisheries. There were at this time two brigs at anchor in the bay, and a few small craft.

I was not sorry, on our arrival, to solicit a little repose, and the less so, as it was our intention to rise at an early hour on the following day, in order to enable us to reach Krusivik, where I wished to examine the Sulphur Mountains. I was the only one of our party on board the yacht who felt disposed to undertake this journey, and as it turned out, as far as the Sulphur Mountains

are concerned, I might as well have remained on board. As ill luck would have it, it was discovered in the morning that one of Mr. Thompson's horses had strayed away during the night, or, as he suspected, had been *borrowed* to assist in the performance of some journey — the practice of taking another person's horse for such a purpose, and quietly returning it when done with, without saying anything about the matter, is not unusual in this friendly country.

After a fruitless search among the twistings and turnings of the blocks of lava, the horse was nowhere to be found, and we were therefore obliged to give up the projected journey, for that day at any rate, hoping to be able to proceed on the following day, by which time another horse could be procured; but to my great mortification the next day proved so unfavourable, such torrents of rain fell, and the mountains over which it was necessary for us to cross were so enveloped in thick clouds, that Mr. Thompson assured me it would not only be useless, but dangerous, to attempt to go to Krusivik on such a day, as we should be sure to meet with nothing but pouring and incessant rain the whole way; and that the mines, even in the finest weather, were wet and swampy, and generally enveloped in mist and sulphurous vapours.

To make up in some degree for this disappointment, and having a good horse at my disposal, I determined to visit the only public school—I may

say the only school of any kind—in the whole island, intended for the education chiefly of young men destined for the church, which was at no great distance from Havnefiord, at a place called *Bessestad.* We found, on our arrival there, that this was vacation time, when all the students go to their respective homes, where they are useful in assisting their parents in getting in the hay for the winter provender of the cattle, cutting and getting in turf, &c.; for these young pupils, like their forefathers, do not disdain to undertake any manual labour for which they are fitted.

We were received on our arrival by the person who, I think, is called the Inspector, and who keeps the house, and has charge of victualling the establishment. This gentleman, according to the custom of the country, set before us wine which he told us was champagne, but which we declined, preferring a cup of coffee in lieu. He was civil and communicative. He took us over the school-room and the sleeping apartments. The whole was in a very miserable and filthy state, to all appearance not having been washed or cleaned out for several years.

The sleeping-room might have been mistaken for a menagerie. There were wooden recesses on either side of it (filled with hay and straw and some dirty bedding), each having a sliding-door which completely shuts up the berth. I was astonished and heard with disgust that each of these cribs or

berths is occupied by two boys, and that till recently each bed-place contained three young men. This may be thought lightly of in Iceland, as I believe it is in Norway, but to us it appears a barbarous practice.

The number of scholars is forty. Before the Sees of Skalholt and Hoolum were united in one, in the year 1797, by order of the Danish Government, Skalholt reckoned forty scholars and Hoolum thirty-four, and landed property was appropriated for the support of these institutions, sufficient for their maintenance, and the pay of their instructors. At the union of the sees, the united schools were transferred to Reikiavik, the very worst place that could have been chosen on every account, as it was shortly found to be; and in consequence they were removed to Bessestad, where there was a good house that had formerly been the residence of the Governors of Iceland, and close to it the best church in the island. There are three masters: the one, Professor of Theology, instructs the pupils in Hebrew and Greek, as far as the Greek Testament and Xenophon; the second is the Lecturer, and instructs the pupils in the Latin language, in history, mathematics, and arithmetic; and the third, in the Danish, Norwegian, German and Icelandic languages. They are all but poorly paid; that is to say, according to our ideas of the nature of their situation and the value of money, but this is not

by any means a fair criterion of judging. Their attendance is constant from October to May, the intermediate months being the time of vacation, when the students go to their several homes. The funds appropriated for the school are said to be sufficient to pay the teachers, and to afford board, books, and clothing to the scholars gratis.

According to the official statement procured by Dr. Hooker, the Bishop of Iceland draws about 1800 dollars, or 360*l.* a-year from the school funds; the lecturer on theology 600 dollars, or 120*l.* a-year; and the inspector or steward, whom I have called the housekeeper, about 220 dollars, or 44*l.* a year, and receives for each of the forty scholars 60 dollars a-year, or 480*l.* in the whole for their subsistence, and the two assistants 300 dollars, or 60*l.* a-year each.

The admission to this school is professedly confined to such as have made a certain progress, to such as have been confirmed, and to such as produce good certificates from the clergyman of the parishes to which they respectively belong; and at the period when they have finished their education, they are strictly examined in presence of the bishop, and those who are found qualified receive a *dimissus* from the heads of the college, which entitles them, on vacancies occurring in the church, to receive holy orders. The clergy, however, are not exclusively taken from this school: the sons

of clergymen and of the peasantry are frequently educated at home, and if they can pass the requisite examination before the bishop, they too are equally eligible for the church.

Whether the system of education at Bessestad school be good or bad, it would be presumptuous in me to give an opinion; I understand, however, that it is less generally esteemed in Iceland than private education at home, where the morals of youth are less likely to be corrupted than at a spot where forty of them are thrown together with very little restraint imposed on them, and where one or two indifferent characters may infect the rest. This objection, natural enough in Iceland, where, from all I could learn, the peasantry and the clergy are an innocent, simple-minded, and virtuous people, would equally apply to most public schools, and the question as to preference still remains to be decided. One thing, however, is certain: not only the clergy of Iceland, but numbers of the peasantry are well versed in the classics, particularly in Latin, which they write with fluency*.

* It may be mentioned, however, to the credit of Bessestad College, that some of the best and most learned works in Iceland have issued from thence, and that *five volumes* in Danish and Latin have just been completed and published by "The Royal Society of Northern Antiquaries at Copenhagen," under the title of "Scripta Historica Islandorum de Rebus gestis veterum Borealium," the work of S. Egilssen, Lecturer of the Collegiate School at Bessestad. It contains historical sagas relating to events that occurred out of Iceland, and more particularly to the exploits of

And not only do the priests cultivate the classical languages and modern literature, and the peasantry exercise themselves in reading religious and historical works, but both the one and the other are very generally versed in the ancient mythology and historical traditions, as handed down in the Sagas and the Eddas, composed mostly in short verses, and easily retained in memory. It would be worse than idle to enter here into the disputed question as to the real authors and the antiquity of those extraordinary works, after so many learned discussions by eminent men of different nations are before the world. The Chevalier Ihre, in his communications with Von Troil, roundly asserts that Snorro Sturleson, who lived in the thirteenth century, was the author of the later Edda, and that this was the general opinion of the Icelanders: for, though they indulge in various conjectures, none of them have mentioned any other name than that of Sturleson, except that they are willing to give the credit of the elder Edda to Sæmund. Many however maintain that Sturleson only collected the songs of the *Scalds*, which existed in Iceland, either in the memory of the natives, or in Runic characters, or both—

the Danes in England from the middle of the tenth to the beginning of the fourteenth centuries, an obscure period in English history. From a glance at this work, I should think Mr. Sharon Turner would find in it much new and interesting matter for his *Anglo-Saxon History*.

thus the dispute is not very unlike to the more modern one concerning Macpherson and his Ossian. Whoever was the author, the tumid, allegorical, and figurative language, and the hyperbolical expressions, would seem to betray an Oriental origin—indeed, the whole wild mythology evidently points to the East. One cannot read the attributes ascribed to Odin without immediately recognising those of Seva the destroyer. He is described in the Edda as "the terrible and severe God, the father of slaughter, the God that carrieth desolation and fire; the active and roaring deity, he who giveth victory and reviveth courage in the conflict; who names those that are to be slain*." And not only to the Eastern mythology was the author indebted, but he was undoubtedly well acquainted with the history of the gods of the Greeks and Romans, whose attributes are merely transferred to other names.

One thing, however, is quite certain,—that the *Scalds* and their poetic compositions existed long before the time of Snorro, and even before the introduction of Christianity into Iceland. Of this we have sufficient proof in the fact, that these bards were well known in several courts of Europe, and some of them were even entertained at the English court so early as in the reigns of Alfred and

* Mallet's Northern Antiquities, English Translation, vol. i. p. 86.

Ethelred. The able and learned historian of the Anglo-Saxons says—"Ethelred was liberal to poets who amused him; Gunnlaugr, the Scald, sailed to London, and presented himself to the king with an heroic poem which he had composed on the royal virtues. He sang it, and received in return a purple tunic, lined with the richest furs, and adorned with fringe, and was appointed to a station in the palace*." "By a verse which remains of it," says Mr. Turner, "we may see that adulation is not merely an indigenous plant of Eastern climates, or of polished times, but that it flourishes hardily even amid polar snows, and in an age of pirates:—

"The soldiers of the king and his subjects,
The powerful army of England
Obey Ethelred,
As if he was an angel of the beneficent Deity†."

This must have happened about the year 1004.

* Gunn. Saga, p. 89. When he left Ethelred in the following spring, the king gave him a gold ring which weighed seven ounces, and desired him to return in the autumn. The Scald was lucky: he went to Iceland and sang; the king then wished to give him two ships, but was told by his treasurer that poets had always clothes, or swords, or gold rings; Gunnlaugr accordingly received fine garments and a gold ring.—p. 103. He then went to various places, but at Upsal he met another poet, Bafu, and, what was worse, when both had sung, the king asked each for his opinion on the other's composition. The catastrophe need hardly be mentioned: Bafu told Gunnlaugr that there was an end of their friendship.—p. 115.

† History of the Anglo-Saxons, by Sharon Turner, vol. ii., p. 315.

It has been asked, how the poetical language of these Scalds could be understood in a foreign country? The reply to this question is easy: at this time the English language was almost wholly composed of Saxon or Scandinavian; the Romans had as yet made no inroad upon it. "The whole fabric and scheme of the English language," says Dr. Johnson, "is Gothic or Teutonic," which, among those of other northern countries, embraces the Icelandic, Norwegian, Swedish and Danish, and all of which still supply us with the greater portion of our numerous monosyllables. "The genius of Alfred" (who flourished a whole century before Ethelred) "was first roused by the recital of Saxon poems, in which the queen took delight; encouraged by her, and stimulated by his own ardent inclination, he soon learned to read those compositions *."

The above objection, therefore, of the language not being understood in Ethelred's time falls to the ground. Of these Scalds, the number named and celebrated for their songs is said to have amounted to 230 between the years 750 and 1157, and the greater part of these were natives of Iceland †.

The clergy are for the most part native Ice-

* History of England by David Hume. Oct. edition, vol. i., p. 77.

† Mallet's Northern Antiquities.

landers, and a great portion is taken from the students who have had their *dimissus* from Bessestad, but some few who can afford it send their sons to study at the University of Copenhagen. The number of parochial churches, or livings, is said to amount to somewhere about 194, but the number of the clergy is greater, as many of the parishes have two churches, the great distance and the danger of travelling, particularly in the winter months when the rugged fields of lava are covered with snow, making it impossible that the distant peasantry could attend at one church. The number of churches, therefore, together with what we should call chapels of ease, are stated to amount to about 300, to each of which is a clergyman, those who are beyond the number of parishes acting as assistants to the regular incumbents. From the great age of many of the incumbents, it is probable that not less than 4 per cent., or twelve, may die off annually*. Now, if we allow five years on an average to each student at Bessestad to complete his education, so as to qualify for holy orders, eight only will go off annually, and therefore one-third must be supplied from other sources. These sources are abundant; many of the clergy, as I have already said, educate their sons at home, and also many of the peasantry, in

* A moderate allowance: in the year 1834 the number of British admirals that died was sixteen, being about 10 per cent. of the whole.

the distant parts of Iceland more particularly. The education of the latter is superintended, in a very considerable degree, by the neighbouring clergyman. By the almost universality of this system of domestic education, there is not probably, in any part of the world, an agricultural or rather pastoral peasantry so well informed and enlightened as those of Iceland.

We have it on the authority of former travellers in this country, and it is confirmed by the resident Danish merchants of Iceland, that it is no uncommon thing to meet with men labouring in the fields, mowing hay, digging turf, building the walls of their cottages, sheds, cow-houses, and performing every kind of menial labour, who will write Latin, not merely with grammatical accuracy, but even with elegance.

The season of out-door labour is so short, and the winter nights so long, that they have ample time afforded them to keep up and improve what they have learnt in their youth; they do not feel that manual labour is any degradation. Dr. Holland has well expressed this:—"The summer's sun saw them, indeed, laboriously occupied in seeking their provision from the stormy ocean and a barren soil, but the long seclusion of the winter gave them the leisure, as well as the desire, to cultivate talents which were at once so fruitful in occupation and delight. During the darkness of their year, and beneath the rude covering of wood

and turf, they recited to the assembled families the deeds and descent of their forefathers, from whom they had received that inheritance of liberty which they now dwelt among deserts to preserve."

The clergy almost universally submit to every species of drudgery from necessity: their incomes are too small to allow them to hire and feed labourers, and nothing is more common than to find the parish priest in a coarse woollen jacket and trowsers, or skin boots, digging peat, mowing grass, and assisting in all the operations of hay-making. They are all blacksmiths also from necessity, and the best shoers of horses on the island. The feet of an Iceland horse would be cut to pieces over the sharp rock and lava, if not well shod. The great resort of the peasantry is the church, and should any of the numerous horses have lost a shoe, or be likely to do so, the priest puts on his apron, lights his little charcoal fire in his smithy, (one of which is always attached to every parsonage,) and sets the animal on his legs again; and here again he has a laborious task to perform in procuring his charcoal. Whatever the distance may be to the nearest thicket of dwarf-birch, he must go thither to burn the wood, and to bring it home when charred across his horse's back.

This mode of life, however, may not be considered as altogether consistent with the character of him who is entrusted with the religious instruction of his humble parishioners. Sir George

Mackenzie says that the minister of Gardé, styled the Provost of Goldbringé Syssel, and superintendent of all the ecclesiastical concerns of that district, was so poor that, to use his own words—"knowing his poverty, we were not surprised that this dignitary of the church exhibited in his person and habiliments a figure, the description of which we shall spare our readers, that they may not partake the pain inspired by the most squalid indigence in a clerical garb." Yet this poor man had a considerable collection of books, and among others translations of some of the works of Pope and Young's Night Thoughts! Their condition may however have, and probably has, a beneficial effect. What an example may it not afford for the poor peasantry to be contented with their lot, many of whom, indeed, are in far better circumstances than those of their pastor! But whether this equality of drudgery and of external habiliments be favourable to the propagation of religion, morality, and of that respect which is due to the sacred character of the pastor, is not for me to offer an opinion; but, taking the whole island, there is little doubt that the pastor and his flock are nearly on an equality as to worldly concerns. None of them can be considered as wealthy, but all of them appear to be contented with their lot: poverty, indeed, may truly be said to be the general condition of the Icelandic inha-

bitants. Never was anything more true, as regards Iceland, than what the poet has applied to another and very different country :—

> "Though poor the peasant's hut, his feasts though small,
> He sees his little lot the lot of all;
> Sees no conspicuous palace rear its head,
> To shame the meanness of his humble shed."

Poor as they are, I have some grounds to believe that there is not a beggar in all Iceland, and Dr. Johnson has given us a reason why it should be so in this island as well as in the Hebrides :—"A country that has no money is by no means convenient for beggars, both because such countries are commonly poor, and because charity requires some trouble and some thought. A penny is easily given upon the first impulse of compassion, or impatience of importunity, but few will deliberately search their cupboards or their granaries to find out something to give. A penny is likewise easily spent; but victuals, if they are unprepared, require house-room, and fire and utensils, which the beggar knows not where to find*."

The poor Icelander is so strongly attached to his native soil, that, like the Swiss when in a foreign country, he is always sighing and repining after home, and never so happy as when he sees a

* A Journey to the Western Islands of Scotland.

prospect of returning to it. Instances are mentioned where Icelanders, holding lucrative appointments in Copenhagen, have thrown them up for the sake of rejoining their family and friends on the island;—so strongly does the love of soil cling to the hearts of this poor people. There is not, in short, a native Icelander, priest or peasant, who does not, though he be

> "The shuddering tenant of the frigid zone,
> Boldly proclaim that happiest spot his own."

Mr. Hooker, who had received his information from Jorgen Jorgenson, the usurper and self-styled Protector of Iceland, states that the value of the glebe lands and tithes of 134 livings amounted to 6464 rix-dollars, which would give to each incumbent about 50 rix-dollars, or 10*l.* a-year; but he says that many others do not exceed 30 or 40 rix-dollars. Sir George Mackenzie, or Dr. Holland rather, states, and Henderson bears out the statement, that the average livings amount not to more than 34 or 35 dollars for each parish in the island; they must, therefore, depend almost entirely for subsistence on their glebe land and their stock of cattle, and a small pittance they are entitled to for the few baptisms, marriages, and funerals that occur among their parishioners. The bishop even has only 2000 rix-dollars, or 500*l.* a-year, a miserable pittance to make a decent appearance, as he is obliged to do, and to exercise

hospitality to the clergy who visit Reikiavik from distant parts*.

What inducement, then, can these solitary and secluded beings be supposed to have for wasting, if it may be so termed, their days and nights, as numbers of them do, in laborious studies, the fruits of which they can hardly indulge a hope will ever benefit themselves or mankind, so little likely are they ever to meet the public eye? Their zeal in this respect can only proceed from the pure and abstract love of literature and science, urging them on to the exercise of their intellectual faculties. The sun of genius will force its beams through the dark clouds of adversity, and the chilling mists of poverty, even though no other portion of the atmosphere, save their own, is likely to be enlightened

* Dr. Holland was furnished by Bishop Vidalin with a Table, containing the number of parishes, of churches, and of inhabitants in the several districts, the totals of which are 184 parishes, 305 churches, and 47,207 inhabitants, from which he arrives at the following conclusion:—

"From this Table, it appears that there are in Iceland (as above) 184 parishes and 305 churches. The average number of inhabitants to each parish is 256 or 257. The average number of people to each church is 155; the largest nominal stipend is 182½ dollars, the smallest (of which, however, there are but two or three instances) is 5 dollars. The whole nominal revenue of the Icelandic clergy (exclusively of the bishop) amounts, according to the Table whence this selection is made, to scarcely 6400 specie dollars, giving an average for each parish in the island of not more than 34 or 35 dollars (*a*)"—that is, about 5*l.* a-year.

(*a*) Dr. Holland's MS. Journal.

and warmed by its beneficent rays. Poets undoubtedly best can tell what poets feel; and one of our greatest poets has said that

> "Fame is the spur that the clear spirit doth raise,
> (That last infirmity of noble minds,)
> To scorn delights, and live laborious days."

But what share of fame, here or hereafter, can the poor Icelandic priest hope for? He might well ask himself—

> "What is fame?—a fancied life in others' breath,
> A thing beyond us e'en before our death;
> All that we feel of it begins and ends
> In the small circle of our foes or friends."

There is, however, another and perhaps a more praiseworthy motive, which may exert an influence on the studious habits of the priesthood. Having to undergo the same toils and hardships as the most humble of his flock, and enjoying no superior comforts or refinements, he must feel that by his intellectual attainments only he can retain that station, and command that respect from his parishioners, which it is so necessary for him to possess.

The present state of literature in Iceland appears now to be somewhat of a different description from what it was in ancient times in this and in some other countries, and, as is not unusual, its supposed decline is the subject of general complaint, though in point of fact it has only changed its character, and become more widely diffused, partaking less of the heroic and romantic than

heretofore. The Archbishop of Upsal, borrowing the expressions of the learned Bishop of Skalholt, Dr. Finnæus, in his Ecclesiastical History of Iceland, where he compares the state of the sciences in that island to the four stages of human life, thus observes:—"Their infancy extended to the year 1056, when the introduction of the Christian religion produced the first dawn of light. They were in their youth till 1110, when schools were first established, and the education and instruction of youth began to be more attended to than before. Their manly age lasted till about the middle of the fourteenth century, when Iceland produced the greatest number of learned men. Old age appeared towards the end of this same fourteenth century, when the sciences gradually decreased, and were almost entirely extinct, no work of any merit appearing. History now drooped her head, poetry had no relish, and all other sciences were enveloped in darkness*."

This decay of learning, however, was not confined to Iceland: it extended over the greater part of Europe; but a new dawn of knowledge spread rapidly after the Reformation, and the introduction of the printing-press produced in Iceland the same beneficent effects as in the rest of Europe. But a very important change took place in the nature of the studies now pursued by these islanders: the clergy,

* Letters on Iceland, by Dr. Von Troil, p. 167.

in particular, instead of making or transcribing Eddas and Sagas (that is, poetical and historical romances), have left such reading and recitals mostly to the peasantry, while their own attention has been turned to sober history, to the collection and registration of events, and digesting them into the shape of annals and chronicles, not only of what actually passes and has passed in Iceland, but also in various parts of Europe. The history and literature of the more refined nations of Europe now form a part of their studies. The English language, in which they find so many words of their own, and so many borrowed from the Latin, is cultivated by many of the clergy. The German they find still more easy; the Danish and Norwegian languages approximate to their own. Some of the choicest works in our literature, especially poetry, have been translated into their own language.

One example will here suffice as an illustration of what has been said respecting the triumph of literary pursuits over pinching penury. It is the case of an Icelandic clergyman of the name of Jonas Thorlakson, the parish priest of Backa. This venerable pastor, when nearly seventy years of age, had just completed a translation of Milton's Paradise Lost into his native tongue, having previously translated Pope's Essay on Man. Three of the first books only of the Paradise Lost were printed by the Icelandic Literary Society, when it

was dissolved in 1796, and to print the rest at his own expense was altogether out of the question, as we are told that the whole of his annual income, from the united parishes of Bægisa and Backa, did not exceed thirty rix-dollars, or 6*l.* sterling, out of which he had to pay an assistant nearly half*. This must of course mean the pittance given by the Crown, his parishioners and his glebe making up the rest. In allusion to his poverty, he thus expresses himself in Icelandic verse:—

"Ever since I came into this world I have been wedded to Poverty, who has now hugged me to her bosom these seventy winters, all but two; and whether we shall ever be separated here below is only known to Him who joined us together."

I cannot omit the account which Mr. Henderson gives of a visit to the dwelling of this venerable man at Bægisa, particularly as it ultimately led to the means of alleviating the ills of poverty, when age and infirmity most required their aid.

"Like most of his brethren, at this season of the year, we found him in the meadow assisting his people in hay-making. On hearing of our arrival, he made all the haste home which his age and infirmity would allow, and bidding us welcome to his lowly abode, he ushered us into his humble apartment, where he translated my countrymen into Icelandic.

* Journal of a Residence in Iceland, by E. Henderson, vol. i., p. 98.

"The door is not quite four feet in height, and the room may be about eight feet in length by six in breadth. At the inner end is the poet's bed, and close to the door, over against a small window not exceeding two feet square, is a table where he commits to paper the effusions of his muse. On my telling him that my countrymen would not have forgiven me, nor could I have forgiven myself, had I passed through this part of the island without paying him a visit, he replied that the translation of Milton had yielded him many a pleasant hour, and often given him occasion to think of England *."

This description of the deplorable condition of so superior a genius as Thorlakson unquestionably was, being fully corroborated by inquiries made of Mr. Bourke, then Danish Minister at the Court of London, was not unheeded by our countrymen. At the instigation of one of the most active members of that liberal, humane, and highly beneficent Society known as the "Literary Fund," the case was immediately taken up, and having, as the committee state, "discovered the venerable Bard of Iceland where he patiently reclined beneath the shed of poverty," they at once resolved, to use their own words, "to give transient affluence to the bard, who shivered near the arctic circle, and, under the hovel of poverty, had erected with the magic of his mind a temple to the sacred muse." In June, 1819, he

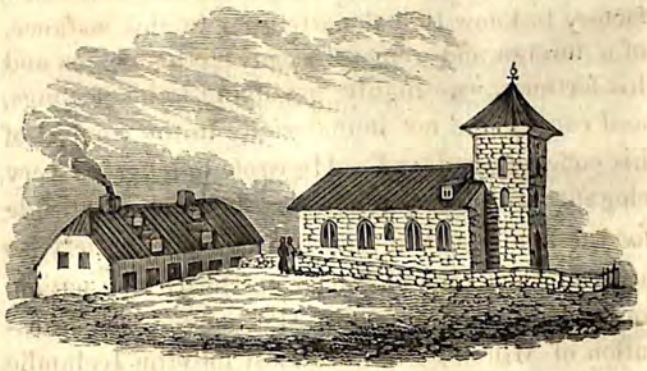
* Journal by Henderson, vol. i. p. 96.

signed a receipt for the money as he writes therein, "signed with my own hand," being then, as may be inferred from his own account to Mr. Henderson, in the seventy-third year of his age. The contribution was 30*l.*, equal to five years' income of his miserable pittance; but he did not long survive this act of benevolence, as it is stated, in a short view "Of the Origin, Progress, and Operations of the Society," dated 3rd March, 1821, that "the poet of Iceland is now in his grave; but it is satisfactory to know that the attention, in this instance, of a foreign and remote society to his genius and his fortunes, was highly gratifying to his feelings, and contributed not immaterially to the comfort of his concluding days." He wrote a letter in very elegant Latin, expressing his heartfelt gratitude for the kindness and generosity of the Society, so accordant with the character of the British nation, and accompanied it with a MS. copy of his translation of Milton's Paradise Lost into the Icelandic language; but the letter is not now to be found, being taken away probably by one of the members who particularly interested himself in the case, and who is since dead*.

* Professor Rafn of Copenhagen, about four or five years ago, applied to Mr. Carlisle (Secretary to the Society of Antiquaries) to assist in a subscription which was going forward in Denmark for the formation of Libraries in the Feroe Islands, in Iceland, and in Greenland. By his exertions about 170*l.* were contributed, and books to the value of about 70*l.* This donation, and the attention that was paid to the venerable Thorlakson, have

The library of Bessestad corresponded with the filthy state of the sleeping-room. It had not changed its character since the visit of Mr. Hooker, who describes it as "a small and dirty room, in which a number of books, principally Latin and Greek, many of them on theological subjects, were lying in great confusion."

Close to the school stands the church, a stone building, with a large wooden roof.



The Church and Collegiate School of Bessestad.

It is the largest church, I believe, in Iceland, equal at least to that of Reikiavik. There is nothing within its walls to attract particular attention, save perhaps a curious old tombstone of one of the ancient governors of Iceland, which formerly stood

created a kind feeling on the part of the Icelanders towards England, which is not the less desirable on account of the dangers of the coast, and the numerous shipwrecks that but too frequently occur.

at the entrance of the church. A full-sized figure of a man clad in armour, and resting on his sword, is carved upon it. A painting of the Lord's Supper is placed over the altar. This is the common scriptural subject, as far as I have seen of them in the churches: some more miserable specimens of the art than others, though there is not much choice, all being equally indifferent. The picture in question was closed up by means of hinges to preserve it, but was opened out for us to look at.

The inspector, having shown us the church and school, took us again into his house, and showed us some well-designed and admirably-finished silver belts, bracelets, and other trinkets, the workmanship of his own hands, a few of which I purchased. Observing a musical instrument on the table called the *Lang-Spel*, I expressed a wish to hear it played upon, on which he sent for his two daughters, but unfortunately the fair damsels had gone out. I believe it is peculiar to Iceland, and the only kind of instrument on the island, with the exception of the violin. The account he gave us of the conduct of the scholars was good; he said they occasioned him but little trouble, being accustomed to assist themselves. Like those of the peasantry in general, their dispositions were characterized as peaceable, quiet, and easy, not to say listless; having once, however, subdued their indolence, the Icelandic peasantry are said to be easily roused,

and are then capable of great exertion, fatigue, and adventurous exploits, and ready to face danger in any shape—indeed, we were everywhere told that the life of the fishermen, in particular, was one of great drudgery and severe hardship, and that the exposure to cold and wet subjected them to disease and infirmity long before old age overtook them. The Icelanders in general are civil and well disposed, but they are said not to feel strongly. They are a very sober people—indeed, the greater portion are said not to know the taste of wine, spirits, or beer. The whole importation of spirits, it appears, would not allow two bottles a year to each individual, and this small quantity is consumed almost wholly in the neighbourhood of the ports and among the fishermen, the peasantry considering it more in the light of a medicine than for the gratification of the appetite.

Our informant told us that all classes of the people are fond of reading; that in their close pent-up hovels, in the long winter evenings, the young people read or repeat to the assembled family the history of by-gone days, the exploits of their ancestors as set forth in the Sagas, and the early adventures and romantic histories of the first settlers on the island. In later times they are in no want of modern books in their native language. The enlightened clergy, at an early period after the Reformation, established a printing-press in Iceland, which is still actively employed on the small

island of Vidoe opposite Reikiavik, and where bibles and psalters, and various religious books are printed, together with selections in general history, and various tracts of useful information. Such a people are not difficult to govern; and as they have little or no intercourse with foreigners, except the few Danish merchants who reside at the ports, and no itinerant preachers of infidelity or sedition to unsettle their minds, there is little chance of any change for the worse, either in their moral or political character.

CHAPTER VIII.

STAPPEN AND SNÆFELL YOKUL.

Cross Faxé Fiord in the Yacht—a *Land* Pilot—Reach the Coast of *Stappen*—Stormy Weather prevents a Landing—Beat off the Coast—Return to Reikiavik—Rough Passage—Basaltic Columns and Caves of Stappen—Extracts of Unpublished Journals of Sir John Stanley's Companions—Ascent of *Snæfell Yokul*—Measurement of its Height—Meridional Direction of Basaltic Pillars from the Giants' Causeway to *Jan Mayen's* Island in the Greenland Seas—No such formation on the two opposite Continents.

On the morning of the 14th of August, the wind proving favourable for a visit to Stappen, (being then in the north-east,) and the weather beautiful, we determined to proceed thither in the yacht, and by so doing avoid a dreary land journey, double the distance of that by water. Not caring to incur the risk of running our vessel on one of the sunken rocks, with which the great bay abounds, we endeavoured to procure a skilful pilot at Reikiavik to take charge of her thither, but it was not without the greatest difficulty that we were

enabled to find a person of that description; and when we did at last succeed, we had to complain, as usual, of the indifference or laziness so common to the people of Iceland, however nearly their interest may be touched: in the present instance we were obliged to wait three hours, before this gentleman could make it convenient to come on board. The moment he did so we got under weigh: the sky was quite clear of clouds and the atmosphere of fog, and the panoramic view of mountains round the Faxé Bay were now for the first time visible all round since our arrival. We all congratulated ourselves on such favourable auspices, and enjoyed the splendid and magnificent sight as we glided along towards the object of our little voyage.

We had an excellent run across the bay, and found ourselves in the evening close to the foot of the Snæfell Yokul, an enormous mountain whose sides were enveloped in snow, reaching considerably down towards the base. We were now anxiously looking out for the place where we were to run in and come to anchor, but soon discovered, to our great mortification and annoyance, that the person who had called himself a pilot, and whom we had so much difficulty in procuring, had only once in the whole course of his life been to Stappen; and, provoking as it was beyond measure, we could scarcely forbear laughing when we discovered that that once was by *land!* The coolness with which he confessed this was certainly amusing, but the know-

ledge of it was so far useful, that it put us on our guard against placing the least confidence in him, and that we should not neglect the proper precautions to be taken by ourselves: indeed, we had occasion to suspect his ignorance, from the circumstance of his endeavouring to convince us that a rock, as we all judged it to be, which had been in sight for a long while as we sailed towards the coast, was nothing more than a ship. The man however, though no pilot, had some redeeming qualities; for when, on our return to Reikiavik, we were informed that he had once saved the lives of some seamen in the most gallant manner, by venturing out into the middle of the bay in an open boat, in very tempestuous weather, to the great hazard of his life, we felt disposed—indeed we could not do less—than to forgive his want of skill on the present occasion.

Having approached quite as near to the coast as we thought advisable or prudent, we laid to, and sent our *land* pilot off, for want of a better, to the shore, that he might serve at least as an interpreter, and ascertain where we were. The boat returned in the course of a couple of hours with a real pilot from Stappen, who brought us a polite message from the principal inhabitant at the place (I believe one of the Danish functionaries) inviting us all to breakfast with him the following morning. He had probably heard of our arrival at

Reikiavik, and could not well mistake our little bark for anything but a yacht.

It was now too late in the night to think of running into the bay or harbour, and as it turned out, it was considered a fortunate circumstance that it was too late; for at an early hour the following morning the wind had veered completely round, and was blowing fresh directly on the shore. The weather, indeed, suddenly underwent a sad change: a dense mist accompanied with rain set in, and we could not see the shore though it was close to us, and we began to be under some apprehension that our boat, which we had sent on shore to land the pilot from Stappen, would not be able to find the yacht again.

All the hope I had entertained of examining this remarkable coast, and viewing those extraordinary basaltic caves and columns which have attracted the attention of former travellers, was now at an end. The weather was most unfavourable, and continued to grow worse, so that one thing only remained for us to do, and that was to beat off the land as fast as possible, and make the best of our way back to Reikiavik.

Our passage was far from being so agreeable as it had been the preceding day on our way to Stappen. The clear sky was now shrouded in dense clouds, the atmosphere thick with mist or fog, the rain fell, and the wind blew—add to all

which the difference of being in eager pursuit after a highly interesting object on the one day, and the mortification of being totally frustrated in the attainment of that object on the next,—and our disappointment will readily be felt.

Before we reached the end of our little voyage it blew very hard, and the sea was running so high as to cause the yacht to be tossed about even more than on any part of the voyage from England, and we had then encountered some pretty heavy seas. The motion was so rough and irregular, that some of the sailors even were *sea-sick*, and amongst the rest the oldest seaman in the vessel, who told me, in a half-angry tone, that he had been upwards of twelve years in the king's service, and had never before been troubled with such a disagreeable complaint. It was next to impossible for the men to keep on their legs in the fore part of the vessel below deck, and the poor cook got sadly knocked about in the execution of his duties, to the no small amusement of the sailors, who, ill at ease themselves, seemed to enjoy a joke at his expense.

Some idea of the pitching of the vessel may be formed, when it is stated that she dipped her jib-boom with such force under water as to snap it asunder, its height, when the vessel was on an even keel or in still water, being not less than thirty feet from the surface. This was the only spar we carried away during the whole of our voyage. It will readily be imagined that we made but slow

progress against a strong gale of wind and such a heavy sea; and it was not, in fact, till the afternoon of the following day that we approached our port, and it was then so very foggy, notwithstanding the wind was blowing a gale, that, confident as we were of our having run a direct course for the port, we deemed it prudent to go about. In a little time, however, the fog began to clear away, and we were shortly enabled to enter the Bay of Reikiavik, and take up our former anchorage immediately in front of the town.

Our being compelled to return to Reikiavik, without being able to effect a landing at Stappen, was the more provoking, as the main object of the trip had been that of inspecting those beautiful specimens of basaltic rocks which front the whole line of the coast of this part of the great bay, forming a series of curious caves, the drawings of which, made by Sir John Stanley and his companions, were shown to me before I left London. The roofs of these caverns, five or six in succession, are supported by columns of basalt, many of which are also found strewed about, some lying horizontally in heaps with their bases pointed to the sea, some standing upright, and others inclined at different angles, many of them curved, not merely at the joints where the convex end of one piece is fitted into the concave end of the other, but bent throughout the whole length like some of those on the

COAST OF STAPPEN,

WITH SNÆFELL IN THE BACK GROUND.

Island of Staffa, which Sir Joseph Banks has described as very much resembling the ribs of a ship. It was the more provoking, as there was every reason to believe, from the accounts already published, that the columns of Stappen afford the most convincing proof of their igneous origin, being here found buried in the midst of lava, above, below, and around them. Here the theory of the Neptunists, who long maintained the aqueous origin of basalt, falls to the ground. "All are now agreed," says Mr. Lyell, "that it would have been impossible for human ingenuity to invent one more distant from the truth."

But though I had to sustain a great and mortifying disappointment in being obliged to desist from any further attempt to land, the extreme kindness and liberality of Sir John Stanley, since my return, have, in so far as valuable information and correct description go, more than compensated any personal gratification that I might have received, and enabled me to give a much better account of this place than I could hope to have acquired by any exertion of my own. He has not only condescended to communicate to me his ideas regarding this most interesting quarter of Iceland, but has supplied extracts from the Journals of the gentlemen who accompanied him, Mr. Wright and Mr. Benners, whose accounts of their perilous ascent of the Snæfell Yokul will, I think, not be the less interesting, because it was made upwards

of forty years ago, but has never till now met the public eye. Mr. Baine, a third gentleman who accompanied Sir John, was employed in measuring a base along the shore, and taking angles for calculating the height of the Snæfell Yokul geometrically, and also in making sketches and observations on the coast, composed of lava and basalt.

Sir John says (in a letter to my father),—"I have sent you several drawings of the basaltic caves at Stappen, from which your son may select those for engraving which he thinks the most interesting. I have copied four views from my own sketch-books, which, as they are in pencil, I hope will not get rubbed in travelling. I have also sent you some made out from Mr. Baine's drawings; you may get copies made of them all, if you like it, for your own keeping, and return the originals at your leisure.

"I have sent you also extracts from the Journals of Messrs. Wright, Baine, and Benners, that your son might be in possession of all the information wanting for the account of the basalts and the Yokul he wishes to give the public, and which, indeed, ought to form a part of any book published by a traveller in Iceland of the wonderful things of the country. Hecla has a great name, but it is nothing more than a volcanic mountain retaining a little heat; but Snæfell Yokul, from its very graceful form and height, and snows, and situation, as the horn of the tongue of land dividing the two

great Bays of Brœde-fiord and Faxé-fiord, is a much more remarkable feature of the geography of Iceland than Hecla. And then its rise out of a basaltic base, and the contact of its streams of lava with the basaltic columns, and the ferocity with which subterraneous fires have broken and tossed about all the country in its immediate neighbourhood, require that attention should be called to it, to induce future travellers to give a great deal of their time to the observation of all its phenomena. The Yokul has, I apprehend, been formed by repeated eruptions of lava, &c., from one crater, but the ground must have been burst in many places; for the shivering of the basalts into the confused state in which they are found, and the throwing up ashes and scoriæ in the pyramidical heaps in which they stand at the base of the mountain, and throughout the whole Syssel of Snæfellness, there must have been eruptions, forming separate hills; for though at a distance the high sands between the eastern and western ends of the tongue of land, dividing the two fiords, have the appearance of a continued range, when seen from the summit of the Yokul, no two hills are joined, but each tells its own story of its formation from fires exerting their force at distinct periods of time. I suspect that, from the heat not having been so intense in the earth, when these hills were thrown up, as when great volcanoes cover miles and miles

of country with lava, many substances might be found amongst them, not much changed from their original state—that is, the state in which they were before their last disturbance—not meaning that of their primitive state, as parts of the original crust of the globe, when they were granite, syenite, or crystallized compounds, but when they were in beds of basalt, or any beds into which granite, &c., could have been changed by heat under pressure, and without contact with the atmosphere. I picked up myself, in a gulley of one of these hills, specimens which I have now lost, but which I well remember struck me at the time as very like jasper and chert.

"You will see, from the drawings, how completely basaltic the whole line of the coast is under the Yokul. It is absurd to suppose that when the lavas of the mountain reached the sea they cooled themselves into miles of such a regular columnar form. That lava in cooling has a tendency to become columnar is certainly a fact. We find it in columns often in Iceland in its very streams, but they are strange, irregular masses.

In another letter he says:—

"The observations I and my companions made on the basaltic lavas are very imperfect, and they have been only slightly noticed by other travellers. I doubt whether the most curious are

accessible by land, unless by a seagull-catcher, and a very calm day is wanting for a good examination by sea. We had a calm day for it, and rowed into the caves, one of which is as grand as, and much more curious than, Fingal's Cave, from the twisting of the columns, and a hole in the roof through which you can see the mountain above it,—a conical outrigger of the great Yokul. The existence of a regular stratum of columnar basalt at the base of volcanoes, is a phenomenon which wants explanation. You want the volcano at the Giant's Causeway, and the Hebrides, the Feroe Islands and Dunbar; but you have basalts and the volcano together at Ætna, the Drizzi near Catania being the most perfect columns I ever saw—not having seen the Giants' Causeway, which I suppose are the most perfect. I apprehend the basalts over which you have seen volcanoes to have been a formation below the sea before the volcanoes broke forth, and to have been heaved up without any great disturbance of their parts."

The following is an extract from Mr. Wright's Journal:—

July 14*th*, 1789.

"We anchored in Stappen Bay at 6 P. M. This is by no means a safe place, if any wind but our present one was to blow. Mr. Stanley therefore desired that those who wished to ascend the hill should set out with him this very night. I embraced

the proposal with Benners, Crawford, and Caldin. We therefore got into the boat in which Mr. Baine also came on shore; as he intends to measure the mountain geometrically. The parts of the shore where we landed, and a considerable way west, is composed of very regular basaltic columns, generally of five sides, some presenting their ends to us, others standing perpendicular, while others are inclined in every possible direction. Stappen is a village consisting of only a few houses. Mr. Stanley had letters from Professor Thorkeim to Mr. Hialten, a merchant, the principal man in the place. While we were conversing with Mr. Hialten, the villagers all crowded round: we were invited into his house, one of the best in Iceland, introduced to his wife, a very handsome young woman; and while horses he had ordered for us were getting ready, we were treated with good claret, mutton, coffee, cakes, &c., Mrs. Hialten doing the honours very gracefully and lady-like. We had poles, into one end of which Mr. Hialten directed a servant to fix nails, with the heads broken off, that we might walk with more safety over the snows. We took one of our Dollond's barometers with us, in case we should have the good fortune to reach the summit, an event we had thought very improbable, and we counted on not being able to do more than reach the snow line, for the inhabitants gave us a fearful account of the dangers to be encountered near the summit. We were told that after a two

hours' ride to the snow, we should only have gained half the height of the mountain, and that then we should meet with rents and chasms, &c., many impassable; also that no person had ascended the mountain since Olafsen, about thirty years ago, and that he had made two unsuccessful attempts, and had never quite reached the top. They added, that two English sailors once tried the ascent, but failed, and in returning, a fog came on, which made them lose their way, one perishing in consequence, and the other with great difficulty joining his companions. But we were not to be frightened, and five horses being ready for us, we set off at 8h. 5m. P. M., after I had taken the height of the mercury in the barometer placed at the merchant's door.

"We were attended by a guide, by Will Campbell, one of our sailors, and by the Danish carpenter, who carried the barometer. We first rode along a stream of lava by the base of a singular hill, a slender pyramid or cone sharply pointed, on which there is very little if any vegetation. At half-past ten we got to the edge of the perpetual snow; here I again took the height of the mercury in the barometer, and the thermometer stood at 32°—freezing point.

"A consultation was now held, whether we should return, or attempt the further ascent. Crawford, Caldin, and I were from the beginning determined to go as far as was possible, but Mr.

Stanley intended to go no farther with us than he thought prudent; he however now decided on proceeding, as did Mr. Benners, though complaining bitterly of the cold. After refreshing ourselves with some provisions we had brought with us, and leaving the guide to take care of the horses, as it did not appear he had any experience of the snow part of the mountain to be of use, we started, each having coarse woollen stockings over our shoes. At first we found the snow rather too soft, but it soon became hard enough to give us a firm footing; but the ascent was steep, and there was no more talking about the cold. Very wide rents in the snow at last became frequent, and forced us to a very zig-zag path; some we could get over by means of our poles, but others were six, seven, and more than eight feet broad, and letting a piece of lava tied to a string fall into them, I found they were fearfully deep: one was forty-two, and another fifty feet deep. In the sectional sides of these we could distinguish and count the layers of the snow that had congealed in different years, to a certain depth, reflecting vivid tints of blue and green of various shades. Caldin and I led the van, but we could not boast of our pilotage, for we had often to return a great way back to find a passing place amongst the rents, and very narrow some of these places were. When within a quarter of a mile of the summit, our sailor, being without a pole, could, from the steepness and slipperiness of the

snow, proceed no farther, but all the rest of us, with a great deal of labour, and certainly some danger, reached a point within 500 feet of the summit. Mr. Stanley and I, after some rest, ventured on, creeping with our hands and feet; but from the very slippery state of the snow, joined with its steepness, we were exposed in our progress, notwithstanding all the caution we could use, to the hazard of a fall into chasms which, had it happened, would at once have put an end to all our measuring schemes. We did gain ground, however, and when we thought we were within a few yards of the highest point, one of the chasms stopped us, which it was impossible to turn or get over; it was where the ascent was steepest. On our right it had a bridge of snow across it of about a foot in thickness,—whether to try this or not was the question. Mr. Stanley and I debated the matter. We had to take counsel only of each other, for all the others remained quiet where we left them. On one hand, it was confoundedly provoking to be baffled when so near the top of this famous mountain, which few, if any one, had reached; on the other hand, the danger we should have to encounter was most imminent:—if the snow across the chasm should give way, or our feet slip, and so gather way in falling from such a very steep and fearful slope as that we stood on, we were gone for ever. We could not look round us without shuddering: for a few minutes we were in suspense, with our feet

resting in the holes we had dug for them. At last we heard our companions calling out to us to stop. At this moment I was trying the depth of the snow all round, when in one part I found, or imagined I found, the solid rock or hard ice. When I told Mr. Stanley this, we set about digging more holes in the snow for our feet, proceeded a little, bore ourselves as lightly as possible over the chasm, and reached what we thought the summit, and tried to persuade those below to follow us. The Danish carpenter, with the barometer, declared he had too much regard for his body and soul to do so: it was now 1h. 5m. A. M.

"When we got to this summit we could observe the sun just about to rise, his beams showing themselves from behind a hill to the northward across the Brœde-fiord, the thermometer 27°. There being no prospect of the carpenter's ascending with the barometer, we began to descend, after writing our mistress's names on the snow,—the emblem of their purity. We used great caution in our descent, for the carpenter hallooed out to us that we were in as much danger coming down as we had been going up. I had like to have found this, for, when within about thirty yards of those below, my pole slipt and away I slid. I was not eager to stop myself, forgetting a great chasm before me, until Benners called out to me to stop. I doubt whether I could have done this with the way I had got, but I rolled over, and this gave me

time to fix my pole in the snow. Mr. Stanley, who followed, was nearly in as much danger; for when he was about crossing the last chasm which separated him from the party, Caldin and Crawford desired him to come on, pointing to where he ought to put his feet, and where they had crossed themselves. Fortunately before venturing he struck his pole into the crust, when it instantly gave way, being a bridge of snow over a deep rent less than a foot in thickness.

"After we had got all collected, I proposed to Mr. Stanley that I should carry the barometer to the summit, since the carpenter objected. It was agreed to, after some objections, and I was accompanied by Messrs. Stanley and Benners—Caldin and Crawford contenting themselves with their view of the summit from where they were:—indeed Caldin had ventured a little further, and by a false step had nearly got into a chasm, but by the help of Mr. Benners escaped.

"We found it easier this time to get to our summit than before, in consequence of the footsteps already made. We took the height of the mercury in both barometer and thermometer. The view was magnificent, and to the west the other peak of this high hill presented itself at the distance of about 1000 yards (the real summit). The northern view was that of the sea, quiet as a child, as if it never could be in a passion; the east, high-peaked misshapen mountains (small, however, compared with

the Yokul;) and to the south we saw the sea, Stappen and its harbour, in which our brig, the John, and another vessel, appeared like two small specks. On the north-east hills beyond an inlet of the sea bounded the horizon, above which the sun had now got up in all his glory, and threw the shadow of our mountain, so defined over the surface of the sea to the south-west, and above its horizon in the air, that it was some time before we could thoroughly be satisfied that it was not another mountain, before concealed from us by a fog. We

Summit of Snæfell Yokul and its Shadow in the Air.

began our descent at 1h. 40m. A. M. At half-past three, we reached the place where we had left our guide and horses, and arrived safe at the merchant's house in about two hours more. Campbell hailed the boat; and while coffee was preparing for

us by Mr. Hialten, who had left his bed for the purpose, I took the height of the barometer where I had taken it before, as likewise the high water-mark.

"After dinner we got into the boat to see the basaltic lavas. The shore for half a mile is composed of them; above them a stream of lava has flowed—indeed, they appear to have been formed from such a stream, but what I think is proof of their being formed by fire is, that many of the columns have perfect porous lava attached to their under ends, the one running imperceptibly into the other. The columns are formed into many large caverns, with arched mouths; we rowed our boat into one of them, the entrance being about thirty feet wide, and about the same height. After entrance it becomes more lofty, and towards the further extremity it is open at top, being about sixty feet perpendicularly high; the columns are straight, and about four feet in breadth, and from twenty to fifty feet high, generally consisting of six, but sometimes of five sides. The depth of water at the entrance is about eight fathoms, and at the farthest extremity about sixteen feet in depth. The columns on some other parts of the shore are very regularly jointed; of these Mr. Stanley, Mr. Baines, and Lieutenant Pierie have taken drawings.

"There are thousands and thousands of sea-fowl, gulls, skarps, &c. &c., inhabiting the shore,

and we made dreadful havoc among them with our guns."

The naïveté of Mr. Benners' excuse for not following Messrs. Stanley and Wright is rather amusing:—

July 14*th*, 1789.

"Our party consisted of Mr. Stanley, Mr. Wright, Crawford, Caldin, and myself, our carpenter, and a sailor. We sank pretty deep in the snow, but patches were here and there frozen over; we went over these safely till we came to a large chasm, which forced us to turn it where it was crusted over. This we crossed with some tremor, for if it gave way we should have fallen to a depth of fifty or sixty feet: we crossed one by one, and so on we went crossing many chasms. When we came to where the ascent grew steeper we rested. Going on, one of our sailors found it so slippery, and not being able to jump, swore it was impossible for him to proceed: we helped him on however. Mr. Crawford sunk up to his knees going alongside one of the crevices, crying out 'O heavens,' and believing he was lost. At about twelve we reached the top of this slope, a base to a higher and steeper slope, that terminated in a cone, and to get to this was a prospect of great difficulty. Messrs. Stanley and Wright went forwards on all fours; Caldin, Crawford, and I followed; and after proceeding twenty-five or thirty feet, Caldin declined going

farther, and began to think how he could get down again, and was thrown into a cold sweat. The snow under him was giving way, and his pole was of no use, and below him was a deep and large chasm, from falling into which he had to hold on by one finger only. I was just in the same situation, when he cried out 'Do help me, or else I shall be down.' To help him I tried to fix myself, by burying my foot in the snow, knowing well that, had my friend above, for he was before me, given way, he would come down straight on me, and thus both of us fall into that horrid and most tremendous gulph. I stuck my pole immediately below his feet, and this kept him up till he fixed himself with more advantage. I now endeavoured to get down again, and begged Caldin to do the same, for I dreaded his falling more than anything else. I got down on the slope of the hill, and waited for him, then I again resolved on mounting this high cone, and got up about three-quarters of it, when I found a large separation almost on the top, slightly covered across with snow. Underneath this I ventured on my belly at a part not covered, and found it very deep, and by peeping through horizontally I observed the chasm to extend quite through, so that I could see the adjacent cone which lay opposite. I was however encouraged by the footsteps of my friends, the impression of which was now deeply marked out by this time. I could hear them speak very distinctly.

I then creeped on, and raised myself gently up by the side of a most enormous precipice, and just had time to see them above me on the very summit. I then laid myself down again to push forward, but recollecting the barometer, and that no one could more conveniently than myself bring it, Mr. Stanley and Mr. Wright being before me, and that neither the carpenter nor the gentleman below would venture, I hallooed to Messrs. Stanley and Wright to know if I should bring it, but they were too much engaged with the prospect and writing their sweethearts' names, that neither of them heard me; so I came down, and by the time I was at the bottom of this cone I found they had followed me, and were more than half way. I waited for them. Mr. Wright came down with great velocity at one place: I thought he could not have saved himself. We welcomed the two heroes. Mr. Stanley said the danger is too great to go up again with the barometer, and proposed measuring the height where we stood, but Mr. Wright would carry it up. Mr. Stanley said he would go with him, and I joined. We succeeded in regaining the top."

While these gentlemen were employed on their arduous ascent of the Snæfell Yokul, Mr. Baine was not less actively and fatiguingly engaged in ascertaining its height. It would not be interesting enough to the general reader to detail the measures he took to obtain this object: it will be

enough to state what the results were, after a careful examination of every step by Mr. Robison, Professor of Natural Philosophy of Edinburgh:—

	Feet.
The height deduced from the Geometrical measurement is	4567
By the Barometrical measurement .	4534
Difference .	33

Mr. Baine also took the elevation of Mount Hecla by geometrical measurement, and made it 4300 feet, which is 700 feet less than what Sir Joseph Banks's party made it by a barometer of Ramsden.

I am not aware that it has ever been noticed by geologists, that basaltic rocks and basaltic pillars, commencing first at Fairhead and the Giants' Causeway, the most splendid examples that perhaps exist, continue to make their appearance in various places as we advance to the northward, on or near to the same meridian line, passing through the western islands of Scotland, exhibiting a magnificent display on the Island of Staffa, and from thence showing themselves in more or less perfection and beauty along the Hebrides, and as far as the Feroe Islands. Advancing still farther, with a little inclination to the westward, they are found in profusion in almost every part of Iceland, intermingled with every species of volcanic production, the whole of this immense island evi-

dently owing its existence to the agency of subterranean fire. Nor does the basaltic formation cease at Iceland, but, continuing northerly with a small inclination to the eastward, it breaks out again on the small island of Jan Meyen, which is also wholly of volcanic origin, consisting chiefly of the Mountain of Beerenberg, 6870 feet high; and on the sides of which are two craters, one of them, as stated by Mr. Scoresby, being six or seven hundred yards in diameter; and the belt between the mountain and the sea is composed of cinders, slags, scoriæ, and trap rocks, striking through black sand and vesicular basalt, the last of which, high up on the side of the mountain, exhibits columnar masses.

Here, then, we have the plain and undeniable evidence of subterranean or sub-marine fire, exerting its influence under the sea, almost in a direct line, to the extent of 16½ degrees of latitude, or more than 1100 statute miles. If we are to suppose that one and the same efficient cause has been exerted in heaving up this extended line of igneous formations, from Fairhead to Jan Meyen, we may form some vague notion how deep-seated the fiery focus must be to impart its force, perhaps through numerous apertures, in a line of so great an extent, and nearly in the same direction. It may probably be considered the more remarkable, that no indication whatever is found of volcanic fire on the coast-line of Old Greenland, close to the west-

ward of the last-mentioned island, and also to Iceland, nor on that of Norway on the opposite side, nor on that of Spitzbergen; on these places all is granite, porphyry, gneiss, mica-slate, clay-slate, lime, marble, and sandstone.

Another remarkable fact is, that with all the materials in Iceland for constituting granite, there is not, it is said, any granite in the whole island. There is in the various lavas, the basalts, the sands, the clays, and the other substances of which the island is composed, all the component parts—silica, felspar, and mica, but not a fragment that bears their union, such as generally occurs in other extensive mountainous countries; and with the exception of a few veins of Icelandic double refracting spar, I could not learn that anything like lime is to be found in Iceland. Is it that the component parts of granite did not happen here to be in a simultaneous state of fusion, or has the granite formation remained below the ocean; and, as is sometimes the case, has it been perforated by the rocks of the island, and now supports them? Whatever the cause may be, the fact I understand is certain*. Would that Mr. Lyell, or some other able geologist, could be persuaded to dedicate a summer or two to the examination of this extraordinary island!

* Sir John Stanley's party found a piece of granite on the shore of Stappen, but it was pronounced to have been part of the ballast of some ship; yet it induced a long search for a rock resembling this specimen, but none was found.

CHAPTER IX.

STATISTICS.

Tenures of Land—Law of Descent—Rents, how paid—Payment of Labour—Marriages, proportion of—Ages of Parties—Extent of the Island—Population—Deaths—Births, Legitimate and Illegitimate—Labour, how employed—Charitable Institutions—Diseases—Number of Cattle—Taxes—Articles of Diet—Indigenous Plants—Those useful for ordinary and other domestic Purposes—Medicines—Ardent Spirits—Crimes and Punishments—Education—Clergy—Morality.

THE shortness of my stay in Iceland, my absence from Reikiavik during the greater part of the time I remained in the country, and the difficulty of meeting with persons on whose information reliance could be placed, where arithmetical numbers are principally concerned, and where statistical information is not regularly registered, are the chief causes that have prevented me from obtaining more detailed answers to the queries which were sent to me, on my departure from England, by one of the members of the Statistical Society, than those which I have been enabled to procure. They are, however, I have every reason to believe, generally

correct, as far as they go, having been collected for me by a gentleman of high respectability and sound judgment, a Danish merchant, who has been resident on the island for a great number of years, and who has ready access to all the authorities at Reikiavik. Many of the answers that are deficient I have endeavoured to extend, from information obtained from other sources, on which I think dependence may be placed. These observations I shall insert after the answers to the respective questions, arranged in the order I received them.

No.

1. *Q.* What are the tenures of estates?

A. Generally for life, on paying about 5 per cent. of the value of the estate, besides an annual payment for the cattle belonging to the estate, which in general are few in number, for the tenant commonly is the owner of the greater part of the live stock.

Obs.—This requires some explanation. Estates are held of the Crown, or in fee-simple; but there is no such thing as entailed estates, they being generally sold at the death of the proprietor, and the produce divided among the children; unless some one of them can purchase the estate, by paying each his share of the property. The Crown lands and many others are let to farmers on what may almost be called perpetual leases. The rent of a farm is paid in two parts—the land-rent,

which is fixed by an old valuation which it has not been found necessary to alter,—and a rent for a fixed number of cattle which it is calculated the farm is able to support; and these are transferred from one tenant to another, each succeeding one to take them, and to leave the same number on quitting the farm. But this is not to prevent a farmer from keeping as much stock as he can maintain, without paying any additional rent. The rent of both is paid, according to agreement, in money, wool, tallow, butter, &c.; the tenant is for life, provided he does not injure the farm, but he may quit whenever he pleases, on giving six months' notice *.

From the Landnama book of 1695, which Von Troil had in his possession, the proportion of estates belonging to the Crown, the church, and the freeholds, were as 718, 640, and 1847, since which many of the two former have been sold, and the number of the latter fully doubled. The estimated number of farms, including freeholds, were then 4058: they are now supposed to be above 6000 †.

2. *Q.* Does the Crown claim any superiority?

A. The Crown claims superiority in very few instances only, which superiority is called Forstrands-Rettighed.

* Sir George Stewart Mackenzie.

† Letters on Iceland by Von Troil.

3. *Q.* What are the laws of descent?

A. The same as in Norway,

Obs.—The law of descent in Norway excludes primogeniture. If a person dies intestate, the property is sold or valued, and divided among the children, so as to give equal shares to the sons, and half shares to the daughters; and where wills exist, they seldom deviate from this rule. If any one of the brothers can pay the shares to his brothers and sisters, it is generally arranged that the freehold estate should be made over to him, in order to retain it in the family.

4. *Q.* What is the ordinary size of estates?

A. Such as are called twenty hundreds, or which are of the value of 300 to 400 specie dollars, and can feed six cows, eighty sheep, and eight horses, are in the interior considered middle-sized estates.

Obs.—This reckoning by *hundreds* would appear to be peculiar to Iceland. The amount of a man's property, or substance in the State, by an ancient regulation, was estimated according to the number of ells of *vad* or *wad*, or, as we are pleased to call it, wadmal, which his family was able to manufacture or consume in the course of a year. Every *hundred* ells was liable to a tax, and according to the number of hundreds was the estate

valued. This, it is obvious, was but a loose mode of valuation, and was easily evaded. They therefore substituted a certain number of cattle which was to constitute a *hundred.* Thus, in the answer to this query, it is said that six cows, eight horses, and eighty sheep make up twenty *hundreds,* and may be considered as a middle-sized estate. Sir George Mackenzie says a hundred consists of two horses, a cow, and a certain number of sheep, with a fishing-boat, nets and lines, and forty rix-dollars in specie. This I suspect is not accurate. Farmers in the interior have no fishing-nets; and as the fishermen are said to constitute one-third of the population, their *hundred* was originally settled on a different principle from that which regulated the pastoral population, this being by the number of ells of wadmal, and that by the number of fish.

5. *Q.* Are estates cultivated principally by owners or tenants?

A. By both.

6. *Q.* If by tenants, what are the ordinary size of farms?

A. Vide No. 4.

7. *Q.* What rents are paid? Are they paid in money, in produce, or by services, or are they mixed rents composed of any two or all of these?

A. Rents are paid in produce, on the coast in fish; in the interior, in butter, sheep, &c. &c., according to an annual tax—partly likewise in money. Serfs do not exist.

8 & 9. *Q.* Do the tenants employ any labourers under them? How are these labourers paid, and if in money wages, what amount?

A. Tenants who are in easy circumstances generally employ one or more labourers, who, besides board and lodging, have from ten or twelve specie dollars annual wages.

Obs.—In the small farms the various kind of labour is performed by the family, excepting certain sorts of work that require speed, as hay-making, for instance, turf-cutting, clearing away the snow to enable the sheep to feed; these are either done by task, or by a common day's work—a *medelman's värk*—or as much as a man of middling strength can perform.

The wages of a hired man-servant were, in 1772, from four to six rix-dollars a-year in money, and twelve yards of *wad* or wadmal for clothing; for a woman, two or three rix-dollars, and five or six yards of wadmal. They receive their food, which is understood to consist of a stipulated quantity of certain articles, as butter and dried fish*. It appears

* Letters of the Archbishop of Upsal.

they have been somewhat increased since the above period.

10. *Q.* What is the proportion of married to unmarried labourers, being above twenty-one?

A. The proportion of married to unmarried labourers cannot be accurately given. Perhaps every seventh individual may be married.

11. *Q.* What is the ordinary age of marriage, distinguishing the sexes, and of puberty?

A. Men 24 to 32; women 19 to 30 in general.

Obs.—The authority given to the clergy, by law, not to marry a woman unless she can read and write, would appear to be an admirable one, and will explain why the peasantry of Iceland are so much better informed than those of any other nation of Europe. It is from the mother that the child learns the first rudiments of education, and receives a taste for reading; and a well-educated mother cannot fail to instil into her young offspring the principles of religion and morality. I am informed by Mr. Broder Knudtzon, that the clergy of Norway have the same authority to refuse confirmation to those, who cannot read and write, as well as answer certain questions regarding religion.

12. *Q.* What is the ordinary fertility of marriages?

A. From four to six; sometimes more.

13. *Q.* What is the gross amount of population?

A. About 53,000.

Obs.—This is but a scanty population for so extensive an island, whose surface is to that of Ireland as 1 to $1\frac{1}{4}$, or thereabouts; but that surface, it is true, from its nature, and the nature of the climate, is perhaps as unfavourable as any that exists within the limits of the two Arctic circles. The extremes of the northern latitudes are 63° 24′, and 66° 33°; and of western longitude 13° 28′ and 24° 31′, and deducting the areas of the numerous fiords, by which it is intersected pretty much in the same manner as Norway, the square contents of the land is about 37,388 statute miles; but, as I was assured, one third part is the very least that could be assumed as wholly useless to the inhabitants. The centre of the island, being nothing but clusters of yokuls or snowy mountains, is said to be fully equal to that extent; so that the inhabited part cannot be reckoned at more than 25,000 square miles; and the population on each square mile will not exceed $2\frac{1}{10}$ persons. This fact alone will suffice to show to what inconveniences the inhabitants must be subject in such a country where there are no roads, and over which it is utterly impracticable to attempt to stir in the winter months while the snow is on the ground.

14. *Q.* What is the annual number of deaths?

A. For the last three years the number of deaths has been from 1100 to 1400.

15. *Q.* What is the number of those who die at different ages?

A. Of 1390 deaths in 1832,

75	were still-born		
784	under	10	years of age
27	from	10	to 20
57		20	30
72		30	40
43		40	50
56		50	60
116		60	70
79		70	80
68		80	90
13		90	100
1390			

Obs.—The proportion of deaths, according to this account, is extremely moderate, being no more than $2\frac{6}{10}$ per cent.; and the more so, from the very great proportion of those who die under ten years of age—namely, 784, considerably more than one-half of the whole deaths.

16. *Q.* What is the annual number of births?

A. In the same year the number of births

was 2516, consequently 1126 more births than deaths.

17. *Q.* What is the number of illegitimate births?

A. Of the aforesaid 2516 individuals, 383 were illegitimate.

Obs.—Among so sober and sedate a population this proportion of illegitimate to legitimate children appears to be very large, being $15\frac{1}{5}$ per cent., or one in every seven nearly. Perhaps it may in part be explained by the manner in which men and women are huddled together in cribs or benches in the miserable hovels of the peasantry.

18. *Q.* What proportion of the population is employed in agriculture?

A. The whole population is employed in feeding cattle, or fishing, or both. The number of those who breed cattle to those who mostly live by fishing is as three to one nearly.

19. *Q.* What employments exist for labourers independent of agriculture?

A. Other employments than those of breeding cattle and fishing do not exist; nor is there any other class of people or townsmen, save the small numbers of tradespeople in Reikiavik and other trading establishments.

Obs.—There are no manufactures of any kind carried on as a trade. Every branch of industry is domestic, and confined chiefly to articles of clothing—wadmal or coarse cloth,

gloves, mittens, and stockings. The peasantry are generally ingenious: they make such pieces of furniture as their simple cottages require; some aspire to make trinkets of silver, snuff-boxes, and some other articles of the walrus tusks; they also forge implements of iron. But Iceland is scantily supplied with metals; vestiges of iron are abundant, but if worth extracting the metal, they have neither wood nor coal to do so—in fact, the only mineral they extract from the earth is a little sulphur from the mines of Krusivik, which is scarcely worth the labour of preparing it. Iceland consists strictly of a pastoral and fishing population.

20. *Q.* Are there any returns to be procured of the exports and imports?

A. Produce has of late years been very considerable, and the export of wool alone has been from 3000 to 4000 *Skippund.*

Obs.—We were told that the breed of sheep had of late years been much encouraged, and that the numbers were fast increasing. The Skippund in Norway is about 320 English pounds. This would give for the export of wool from 960,000 to 1,280,000; but besides the raw wool, there are exported annually not less than 200,000 pairs of knitted stockings, and 300,000 mittens, or gloves without fingers. The Iceland sheep have remarkably fine

fleeces of wool, which the farmers never shear, but in the spring of the year it is taken off whole, as if it were a skin that easily slips off. The weight of a fleece is from four to five pounds. Other exports are dried fish, salted cod, and other species of the same genus, for the quality of which the fishing banks of Iceland are celebrated, but which, of late years, have been much invaded by French and Dutch fishermen, to the great grievance of the Icelanders. They also export fish-oil, whale-blubber, skins, eider-down, and a small quantity of the *Lichen Islandicus* for medicinal purposes. Their imports, with the exception of salt and timber, are generally in the hands of the Danes, and consist of a small quantity of wheat and much rye, wine, iron, earthenware, furniture, and various articles of colonial produce, especially sugar and coffee, besides beer and spirits, snuff and tobacco, all of which are in almost general demand, especially the last two.

21. *Q.* What number of medical men are there on the island?

A. One physician, and six district surgeons.

22. *Q.* What charitable institutions?

A. There are no charitable institutions except four hospitals for invalid lepers, of which there are generally not more than three or four in each.

Obs.—It is highly creditable to the Icelandic population, that the sick and the poor are almost wholly supported by their own families, and that a sort of disgrace attaches to those who send them away to be taken care of by strangers, even though maintained at their expense; those who do not take care of their own poor are compelled by the Sysselman, on the report of the Repstiore, to pay a much larger sum than the expense of their maintenance would be in their own families. It is on this account that there are so few places of reception either for the poor or the diseased. No stronger proof of this is wanting than the circumstance of the only workhouse or poor-house in the island having been converted into the Governor's house at Reikiavik.

23. *Q.* Is the age of puberty different in Iceland from that age in England or France, and what difference exists?

A. Vide No. 11.

24. *Q.* Are there any returns distinguishing the nature of the prevalent diseases?

A. The most prevalent or endemic diseases are, chiefly, catarrhs, rheumatism, inflammatory fevers, liver complaints (*hepatalgie*), and induration of the liver. The other diseases are the same, generally, as those of Denmark and Scandinavia. It is to be observed, however, that the measles and

scarlatine fevers are less frequent in this country than on the continent.

25. *Q.* The number of hospitals—general information respecting them—of operations performed —their mortality?

A. There are no hospitals save those mentioned under No. 22, which, after all, are of little importance. On the other hand, there is an important Collegiate school at Bessestad, which may well be considered as the only public institution of importance in the country.

26. *Q.* What proportion of the country is in pasture—what in tillage?

A. About one-third of the surface of the country is considered to be covered with vegetation of some sort or other, which is suitable for pasture —the other two-thirds consist of yokuls, or snowy mountains, and fields of lava.

27. *Q.* What are the numbers of cattle in Iceland, distinguishing draught from other cattle?

A. The number of sheep is about 500,000; heads of cattle, 36,000 to 40,000; horses, from 50,000 to 60,000. There being no wheel-carriages of any description on the island, there are no draught cattle: the horses are the beasts of burden.

Obs.—The Icelanders depend on the cattle and the sheep for food and clothing; their horses may be regarded more in the light of a

luxury, but an indispensable one, as without them they would not have the means of carrying their produce to barter in exchange for other articles of necessity or convenience, at the fishing villages or ports at which the annual supplies arrive from Copenhagen. In the preservation of their sheep the peasantry are much hampered by the badness of the climate, by the scantiness of winter food, and by the attacks of the eagles, the ravens, and the foxes, more particularly at the lambing season, when vast numbers of the young animals are carried off by all of them. But the foxes are the most destructive: they are the curse of the country; and with all the pains taken to destroy them, and the rewards placed on their heads, they are supposed to be on the increase. The Icelanders say that a king of Norway (I forget his name) sent them there out of revenge for so many of his subjects having gone over to settle on the island. Many ridiculous stories are told of the cunning tricks of the fox, some of which are detailed by Henderson at the third or fourth hand. One is, that when he wishes to feast on a gull, he walks backward towards them with his tail cocked up in the air, by which, being white, the silly birds think it one of themselves, and he thus takes such one of the flock as suits him. A gull is proverbially

a stupid animal, and a fox a cunning one, but neither the cunning of the one, nor the stupidity of the other will make his readers gulls enough to give credit to such idle stories, which are borrowed from Olafsen and Povelsen, who had them from Horrebow, and he from some one else.

28. *Q.* What taxes are paid, distinguishing direct from indirect?

A. There are no direct taxes, except tithes to the clergy, rates to the church and to the poor, and from most of the peasants the tax of 1½ specie dollar value, which serves to add to the stipend of the Sysselman. The principal receipts of the State proceed from the landed property of the Crown, which is still considerable, as well as from ½-per cent. on land of inheritance, &c., which on the whole amounts to little.

Obs.—Strictly speaking, the taxes, though moderate, are direct property taxes, and every one pays according to his circumstances, whether in landed property, stock, or money; and the amount of the property is estimated, as above-mentioned, by the number of *hundreds* an individual possesses. The amount of these taxes, after certain deductions, is divided between the public revenue, the clergy, the churches, and a small portion applied to the maintenance of the poor. They are mostly

paid in kind, such as in fish, butter, oil, tallow, &c. to the sysselman, who disposes of them to the best advantage, and pays the proceeds in money to the landfogued or treasurer. The whole amount is very inconsiderable, one-third of which is retained by the sysselman as compensation for his trouble.

29. *Q.* Diseases peculiar to Iceland?

A. They are, as before stated, about the same as in Norway; and leprosy is not more prevalent here than the disease called *Radesyge* there; and the general state of health is very much like that of other inhabitants of northern climates.

Obs. — The leprosy, which I suspect sometimes proceeds to what has been called elephantiasis by some writers, is a dreadful disease in Iceland, and is thus described by Von Troil:—"Its first appearances are swellings in the hands and feet, and sometimes also in other parts of the body; the skin becomes shining and of a bluish cast, the hair falls off, the sight, taste, smell, and feeling are weakened, and often quite lost; boils appear on the arms, legs, and face; respiration becomes difficult, and the breath fetid; aching pains are felt in all the joints, a breaking out spreads over the whole body, and is at last converted into wounds, which generally terminate in death*."

* Von Troil's Letters on Iceland.

This horrible disease, which some think, but others deny, to be hereditary, is owing, most probably, to a fish diet and poverty of food, want of all kind of exercise in the winter months, and exclusion from air in their close hovels, where a great neglect of cleanliness almost necessarily prevails; the total want of vegetables, except occasionally Iceland moss, and a few dwarf cabbages and potatoes, where trouble has been taken to cultivate them, may also contribute to this disease; but I believe it to be mostly owing to the universal practice of wearing woollen clothes next to the skin. Before the introduction of cotton and linen into Great Britain, and when woollens were universally worn, the leprosy would seem to have prevailed in as frightful a degree, perhaps, as in Iceland, whereas it is now rarely, if ever, heard of.

30. *Q.* Is there any table of longevity of Iceland?

A. There are tables, which generally resemble that which has been given for the year 1832. It must be observed, however, that mortality is sometimes more considerable.

31. *Q.* The number of medical men—the mode of remunerating them?

A. The former part of this question has been answered already, under No. 21. Medical men have some pay from the Crown; the physician 300

specie dollars, and the surgeons 150 specie dollars each per annum.

32. *Q.* The articles of diet peculiar to Iceland?

A. Meat, milk, fish both fresh and dried, bread made of imported corn, cabbages, potatoes, game, fresh-water fish, Iceland moss, which is used for porridge in some parts of the island.

Obs.—It may here be observed, that in this bleak and dreary region of the globe, with a climate of the worst description, and a soil two-thirds of which is wholly barren, and the rest but sparingly covered with indigenous plants of stunted growth, most of the articles of diet, beyond fish and butcher's meat, must be imported. In the vegetable kingdom, however, Nature has not been niggardly in endowing many of their plants with qualities which have fitted them for the nutriment of men and cattle, and others for domestic utility. Dr. Hooker has collected and arranged most of these in his "Flora Islandica" from various sources, and from his own researches on the spot; and, as I conceive, they may properly be introduced here, in addition to the very general answer returned to this question:—

i. *Pinguiuscula vulgaris.* The Icelanders make use of this instead of garlic.—*Voyage en Islande.*

ii. *Elymus arenarius.* The seeds are occasionally made into a sort of bread.

iii. *Polygonum bistorta.* The roots are often eaten raw, and sometimes converted into bread.

iv. *Angelica Archangelica.* The Icelanders gather the stems and roots of this plant, which they eat raw, and generally with the addition of fresh butter.

v. *Rumex digynus.* All the species of rumex (of which there are three others) are boiled and eaten by the Icelanders, though only the young shoots of the *acutus* are employed. Of the *acetosa,* a beverage is made by the common people, by steeping the plant in water till all the juice is extracted. This drink is kept some time, but soon becomes bad and putrid in warm weather.

vi. *Silene acaulis.* Boiled, and eaten with butter, by the Icelanders.

vii. *Potentilla anserina.* The roots are frequently eaten in the southern parts of the island.

viii. *Cochlearia Danica.* Occasionally eaten as spinach, and reckoned of service in the cure of the scurvy, though seldom made use of.

ix. *Trifolium repens.* The peasantry in the northern and eastern parts of the island use it as pulse.—*Voyage en Islande.*

x. *Gyrophora hirsuta.* Povelsen describes this

plant as by far the best genus for food among the lichens.

xi. *Cetraria Islandica.* This is that species of moss best known as the *Lichen Islandicus.*

xii. *Fucus palmatus.* This, the *Sol* of the Icelanders, is the most frequently prepared and eaten of any of the genus. Dr. Hooker says:—"On the Scotch coasts it is eaten raw by the natives, and in the county of Caithness, in particular, I have seen a number of women and children gathering it from the rocks, and making a meal of it, devouring it with avidity." He has enumerated in his list upwards of forty species, almost all of them common to Scotland and other parts of Great Britain, a great number of which are esculent and nutritive.

Besides these, the Icelanders are in no want of indigenous plants useful for domestic, pastoral, and medicinal purposes.

xiii. *Eriophorum polystachion.* Of the *pappus* of this plant (the cotton grass) the natives make wicks for their lamps.

xiv. *Holcus odoratus.* Said to be used by the Icelanders to perfume their apartments and their clothes.

xv. *Arenaria peploides.* This is steeped in sour whey, where it ferments; then the liquid is strained off, and fresh water added to the

beverage, which is said to taste like olive oil. —*Voyage en Islande.*

xvi. *Dryas octopetala.* A plant everywhere common, of the dried leaves of which the inhabitants make a sort of tea.

xvii. *Thymus serpyllum.* An infusion of the leaves is often used to give an aromatic flavour to the sour whey.

xviii. *Achillea millefolium.* The Icelandic appellation *Vall-humull* (field-hops) seems to imply that this plant has been used instead of hops in that island, as it is still in some parts of Sweden. At present the natives only make an ointment of its leaves with butter, which they apply to cutaneous and other external sores.

xix. *Zostera marina.* This plant the cattle eat, and the natives gather and dry it for their beds.

xx. *Lycopodium Alpinum* and *armotinum* are used abundantly in dyeing woollen cloths of a light yellow colour, by merely boiling the cloth in water, and mixing with it some leaves of the *Vaccinium uliginosum.* A dark yellow, it appears from Olafsen and Povelsen, is given to cloth by the *lichen Islandicus,* and a deep brown by the leaves of the *arbutus uva ursi.*

xxi. *Gyrophora cylindrica.* Used in times of scarcity as food, but more frequently for dyeing woollen of a brownish-green colour.

xxii. *Fucus serratus.* This, and various other large species of *fucus,* serve occasionally for food for the cattle and fuel for the poor natives.

xxiii. *Equisetum sylvaticum.* Various species of *equisetum* (of which five, besides this one, are in the list) are given to the cattle in Iceland, where they are said to be accounted excellent food for horses.

xxiv. *Salix herbacea.* The downy substance from this and other species of willow is applied by the natives to wounds both of man and beast. The leaves steeped in water are employed in tanning skins. The wood is used in making ink, being steeped in a decoction of the leaves, to which is added some of the earth used in dyeing (a kind of ferruginous clay)—all are then boiled together until the liquid has acquired a proper consistency.

xxv. *Ranunculus acris.* Often used for raising blisters.

xxvi. *Sedum acre.* Mr. Povelsen says, "Commonly used in Iceland as an emetic."

xxvii. *Menyanthes trifoliata.* The *reidinga,* already mentioned as employed to prevent the saddle, or any load, from chafing the horses' backs.

xxviii. The grasses for sheep and cattle in the meadows and valleys through which rivers or streamlets flow are tolerably abundant, and

keep both horses and horned cattle in good condition during the summer months. They also afford good hay, when the weather will allow them to get it well in. They consist of those most common in all the northern climates. Of the *Agrostis* Dr. Hooker enumerates seven species; of *Phleum* three; of *Aira*, seven; of *Poa* nine; of *Festuca*, six. Besides these, there are various species of *Arundo, Triticum, Plantago, Juncus, Rumex, Lathyrus, Vicia, Trifolium*, and a great many others. Many of the fuci or sea-weeds are eagerly devoured by such of the horses and cattle as are near the coast in the winter season, when other food fails them, which is often the case. Many of the mosses and lichens are also eaten by the sheep and cattle, and that beautiful lichen, the *Rangiferinus*, is not the favourite of the rein-deer only, but sought after by the domesticated animals. The rein-deer are not included among such in Iceland; but many thousands are said to run wild in the interior and uninhabited parts of the island, having been first introduced in the year 1770 from Norway with the intention of making them useful*; they might, indeed, by domestication, become most valuable: their skins, when dressed, are beautiful; at present

* Von Troil's Letters.

they are entirely useless to the natives. I could not learn that any attempts had been made to domesticate them, or that they consider them worth the cost of the powder and ball to shoot them; besides which, in their wild state, they are difficult to approach, and fly to the mountains on the sight of man.

In addition to the application of the products of the soil above enumerated as articles of food, whether for man or beast, Von Troil mentions three plants which the natives convert into bread: these are the flour made of the *Fial-gras*, or rock grass (the lichen Islandicus); of the *Kornsyra*, (*Polygonum bistorta*); and of the *Melar* (*Arundo arenaria*); and these plants are said to afford no mean substitute for the sour rye biscuits imported from Copenhagen, and the sour doughy bread made from rye flour. Crow-berries (*Empetrum nigrum*), and juniper berries (*Juniperus communis*), they frequently mix with curds or new milk.

The Icelanders would seem to have a taste for sour food. Their butter even (except what is brought fresh to Reikiavik) is generally used sour, which they call *surt smoer*. It is hard pressed down into casks, when it will keep for years, and is supposed to be the better for age. They keep also sour whey (called *syra*) in casks, where it ferments, and is left for

months, improving, like their butter, with age. The *skyr*, which is the curd after the whey has been pressed out, is also preserved for future use. Their cheese is mostly, if not wholly, made from sheep's milk, and is so bad, that none of our party could venture to eat it.

The *fuci*, of which there are not fewer than forty species, and with which the coasts abound, are in much use both by the people and the cattle. The *Fucus palmatus*, the *Dulce* of the Scotch, and the *Sol* of the Icelanders, is perhaps the most frequently prepared and eaten of any other of the genus; but it is not eaten fresh as the Scotch use it, and but seldom raw, and then after it has been dried in the sun. The *Fucus saccharinus*, the *Laver* of the Welsh, and the *Sloke* of the Irish, supplies them with one of their best vegetables; and it is somewhat remarkable that, as the Irish eat it with sour milk, the Icelanders make use of it with their syra, or sour whey.

33. *Q.* How are medicines provided—what are they?

A. In Reikiavik by the privileged apothecary, and in other places by the district surgeons, who also have the privileges of apothecaries in districts where no apothecaries' shops are found. Those

medicines which are generally used in Denmark are also in general use here.

34. *Q.* Are spirits much used—their effect?

A. Of late years brandy has been much cheaper than formerly, and consequently the sale has considerably increased, so that about 1000 barrels have been imported, which makes something more than two bottles per annum for each individual. The effects of the increased consumption of brandy can be attended with no salutary results, which however, be they good or bad, will not be apparent to their whole extent till after the lapse of some years.

35. *Q.* Are epidemics frequent?

A. Epidemics are not very frequent.

36. *Q.* The state of crime, of punishment, of morals, of education in Iceland?

A. Crimes are rare; small thefts, especially of sheep, are the most frequent; but the high tribunal of the country has seldom to decide more than six or eight cases per annum, private as well as public. The whip is the only punishment applied in this country, excepting fines. Those who are punished with hard labour are sent to Copenhagen. Education is altogether domestic; every head of a family teaches his children generally to read and write, and the precepts of religion according to the religious books prescribed by law.

Obs.—The gentle and peaceable disposition of

the natives, their moral and religious education and sober habits, act as preventives of crimes of a flagrant kind, so that capital punishment, which is confined to murder, has not occurred for many years. The last instance of one condemned to die was of a peasant for the murder of his wife, when no one in the island could be prevailed on to perform the office of executioner, and it was necessary to send the criminal over to Norway to undergo the sentence of the law. No Icelander, unless for the accusation of a crime that would, if proved, incur capital punishment or imprisonment for life, can be kept in confinement before the time of his trial—indeed, so infrequent are crimes of any kind, that the Governor told us the courts of law at Reikiavik had little or nothing to do.

37. *Q.* Custom-house returns for a series of years, —the quantity of grain imported,—the statistics of the fisheries for a series of years?

Obs.—No return made to this question.

CHAPTER X.

LEAVE-TAKING.

Return of the Prince of Denmark to Reikiavik—his personal Appearance and Character—his Suite—Collection of Minerals —Mountain of Obsidian—The Prince's Visit to the Yacht—Dinner given by the Governor—Popularity of the Prince—Take leave of Him and the Governor—Passage home—Arrival in London.

On entering the harbour of Reikiavik, when returning from our unsuccessful voyage to Stappen, we observed a number of flags flying in the town, and also on board the few Danish merchant vessels which were riding at anchor in the bay. This display of colours, as we were soon given to understand, was in compliment to the return of the Prince of Denmark from the extensive tour he had been making in the north-eastern part of the island. As a matter of common courtesy, we thought it right to join in the compliment, by hoisting English colours, not having any Danish on board. It was too late to go on shore that evening, but on the following morning, which was Sunday, we called upon Mr. Knudtzon to ask him to introduce us to his Royal Highness, who, while

we were conversing in his room, made his appearance without ceremony, when we had each the honour of being presented to the Prince. He expressed the pleasure he felt on meeting with so many English gentlemen on this remote island, was extremely sociable, and remained for nearly a couple of hours in conversation with us.

The Prince is a young man, as I should think about twenty-six years of age, of easy and affable manners, a suavity of address, an inquisitive turn, calculated to invite rather than repel familiar conversation. Free from any appearance of hauteur or reserve himself, he soon puts others at their ease in his presence. His figure is of the middle size, and in good proportion; his countenance not such as would generally be called handsome, but agreeable, and marked with intelligence; and if he should, unfortunately for himself, not be considered, which I sincerely hope he may be, as—

> "The expectancy and rose of the fair state,"

and if he be not precisely such a copy of that Prince of Denmark whose portrait our immortal bard has drawn, and whom we have been in the habit of admiring as—

> "The glass of fashion, and the mould of form,
> The observed of all observers,"

he was yet what, in common parlance, we should call a fine young man. It was not from a single interview that I formed my idea of the character

of this prince. We saw a great deal of him in the short stay we made on the island, and found him always, and on all occasions, the same: always civil, agreeable in conversation, and studious to oblige. His suite consisted of two lieutenants of the navy, as aides-de-camp; their names Irminger and Pencillius, two remarkably fine young officers, both of whom spoke English, the former perfectly; a physician, and a painter of the name of Klose, a German.

On my introduction to the Prince, he immediately said that we were old acquaintances; and on my expressing some doubt, he said, Yes, at Geneva; he repeated the same thing at a future interview. It was not for me to contradict him, though I could not call to my recollection having fallen in with him there, or anywhere else, although I certainly was at Geneva at the time he mentioned. He told us that, while in the north of the island, they had been very fortunate in the weather, which was constantly fine and pleasant; but as they approached the south, it became bad, with frequent rain, of which little or none had fallen in the northern districts.

On the same evening the Governor invited us to meet his royal guest, who was exceedingly communicative, and dwelt largely on the pleasure he had received in his northern tour. His painter had made a number of sketches and water-colour drawings, and his attendants had collected a

number of mineralogical specimens, among which was an immense mass of obsidian, so large, indeed, that they found it difficult to convey, and therefore broke it into fragments, leaving the greater portion behind; yet what he had brought was of immense size, and being much admired by us for its clear, glassy, dark colour—indeed, perfectly black, which is rarely met with in large masses,—he offered it as a present to Mr. Smith, observing to him that, whenever he married, he desired he would make from it a set of ornaments for his wife, and tell her the Prince had given it to him as a memorial of friendship *.

He had not made any collection of minerals

* To remove all doubt as to the volcanic origin of obsidian, about which at one time there was so much doubt and discussion, Dr. Holland proceeded to the north-east of the island, to a place called Reikiadalr, to examine it *in situ*. He found a guide who could conduct him to the spot where it was thus to be seen:—"A valley," he says, "nearly circular in form, and about a mile in diameter, exhibited at its upper extremity a vast bed of what appeared at a distance to be the same rough lava which had so frequently before occurred to our observation. Approaching the spot, we were surprised and gratified to find that this mass of rock was entirely composed of obsidian and pumice, the former of these minerals giving a brilliant glassy lustre to that face of the bed which is opposed to the valley beneath. The front of the rock on this side has an elevation nearly perpendicular of about thirty feet(*a*)." Of the volcanic formation of this bed, extending in one direction more than a mile, Dr. Holland could not entertain a doubt. No clear glassy black specimens could be procured; the greater part of the mass appeared to be in a state of transition into pumice.

(*a*) Dr. Holland's MS. Journal.

himself, but a small vessel of Mr. Knudtzon had just at this time arrived, which he had sent to the northward expressly to collect some for the Museum of Copenhagen. Of these he allowed me to take whatever I pleased. They consisted mostly of such as are common in the island—zeolites of all kinds, radiated and foliated; several beautiful specimens of chalcedonies; chalcedonic nodules filled with quartz crystals, large masses of grouped quartz crystals, and specimens of siliceous sandstone, of fine granulated quartz of the whiteness and texture of refined sugar; various specimens of compact and porous lava and pumice-stone; specimens of rhomboidal crystals of double-refracting calcareous spar, which I believe is peculiar to Iceland, and which possesses the remarkable property that, if broken into the smallest fragments, each fragment will be a perfect rhomboidal double-refracting crystal. He had also in his collection specimens of that singular mineralized wood, the surturbrand.

The Prince was invited to breakfast with us on the following morning in the "Flower of Yarrow," and readily gratified us by accepting the invitation. At eleven o'clock Mr. Smith went on shore to bring him off in the cutter, in order that he might pay his Royal Highness the respect of steering the boat himself. The yacht was dressed out in all her colours for the occasion, and as she is one of the Royal Yacht Club, she was well provided with flags.

The flag of Denmark, which we had procured from one of the vessels in the bay, was hoisted on the fore-topmast-head. We soon observed the cutter push off from the jetty; and notwithstanding the large party which was in her, the boat's crew forced her through the water at a speed rarely exceeded by the finest crew that ever pulled in a man-of-war's gig.

The Prince was accompanied by his Excellency the Governor, the two aides-de-camp, and Mr. Klose, the German artist, Mr. Knudtzon, and one or two of the principal residents of Reikiavik, who were also invited to meet him. The Prince was dressed in a neat general's uniform of green, and he wore a star upon his breast. His aides-de-camp were also in uniform. The party remained some little time on deck; and after inspecting the run of the vessel (if I may be allowed to use the expression), and admiring her deck, which was remarkable for its space when free from the boats, they went below into the large cabin, where a handsome breakfast was provided. The Prince expressed himself greatly pleased with the internal fittings of the yacht, and was surprised at the extent of the accommodations, more particularly at the dimensions of the principal cabin, which he remarked was not only higher (being a little above six feet), but in every respect superior to that of one of their frigates.

Mr. Smith having proposed his Royal Highness's

health, he immediately followed up the toast with "The Flower of Yarrow, and the Gentlemen on board," and he subsequently drank each of our healths separately, addressing us severally by name. After breakfast, cigars were handed round, and those who preferred it smoked pipes, of which Mr. Smith had a choice collection.

About three o'clock the party broke up, and the Prince, on taking his leave, complimented us in the most gracious manner, and again expressed a hope that we should some day meet in Denmark, where his house would always be open to us.

On showing my sketch-book to him, at the request of some of the party present, he told me that we must all go and look at Mr. Klose's drawings, which were taken during their travels on the island, and which he thought would interest us. This gentleman having kindly promised to allow us to see them, we went on shore the following morning to his house, or rather to the apartments which he occupied, at the hour appointed.

We were not disappointed in inspecting his performances: the sketches were full of taste and freedom, and he had made one of the best representations of the Geyser of any I have yet seen. We found the Prince at Mr. Klose's, and after having carefully looked over the drawings, we accompanied him to the Library, where we passed away two or three hours, in examining some curious old books. In the morning, previous to our going

on shore, we received a letter from the Governor, conveying the Prince's invitation to dine with him at four o'clock on that day. We accordingly went, and met the bishop and a few other of the principal people of Reikiavik. Although quite unable to enter into any conversation with the bishop in his own language, yet I felt great pleasure in the mutual endeavour to instruct each other in the names of different objects, as used by the two nations, many of which come very near to each other in the two languages,—sometimes identically the same, only perhaps pronounced a little differently; —and whenever this happened to be the case, it seemed to amuse the good bishop exceedingly. This worthy man appeared to me one of the mildest and most amiable gentlemen I have had the good fortune to fall in with, and this is the character he bears on the island. He is a native, and has risen to his present situation entirely by his own merit, having, I believe, been one of the scholars at Skalholt, and afterwards *lector* at Bessestad.

The Governor sat at the end of the table, and the Prince took his seat next to him on his right hand. The dinner was remarkably well served up, and there was a display of vegetables, poor enough it must be admitted, but such as is seldom met with at a dinner-table in Reikiavik, and they were all the produce of the Governor's garden. The Prince conversed much during dinner; and

the Governor was, as usual, full of his jokes and good humour. No one felt under any restraint, and we passed a most agreeable evening. After dinner we all walked up to the Scholar's Monument on the hill, and enjoyed a fine view of the grand panorama of mountains that skirt the Bay of Faxé.

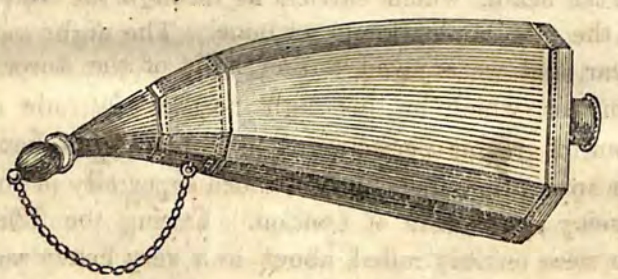
Having taken our leave of the Prince, who again repeated to each of us his hope that we should come and see him in Denmark, and re-assured us of the kind attention he would pay to us; and having taken a parting farewell of the Governor and his guests, we went on board the yacht to sleep, with the intention of getting under weigh for England at break of day.

"I ought to state that the whole conduct of the Prince gave great satisfaction to the resident merchants and the settled inhabitants of Reikiavik: he never once complained of his banishment, nor, of course, did any one presume to hint at a wish to know the cause of it; but he once observed to his countrymen, that he supposed he owed his visit to Iceland to his having spoken his mind too freely at Court. The inhabitants, previous to his northern tour, had given him a public ball, at which he made himself very agreeable, and danced a great deal, particularly with the *belle* of Reikiavik, the shoemaker's daughter, who was reckoned a great beauty, and to whom he was very attentive.

It is to be hoped that this visit of the Prince will have the good effect of being attended with benefit to those who, in all probability, will become his future subjects—indeed I am confident he will neither forget nor neglect them. A small addition to the public expenditure of Denmark might be made an important boon to these poor people, and above all to the clergy, whose lamentable condition he must have witnessed on his travels. An addition of ten pounds a-year to each of their miserable stipends, which would not entail an increase of three thousand pounds—nay, even half that sum —would bring down the blessings of the whole community on his head. It would not appear that he is much out of favour at home, for I perceive, by the papers, that he has returned, and is appointed to the command of the fortress and town of Fredericia, on the eastern coast of Jutland, opposite to Zealand.

And now I must bid adieu to Iceland, in all probability—though I hope not—for ever. I must not, however, take leave of Reikiavik, without recording the expression of my warmest thanks for the kindness we received from the Danish gentlemen with whom we had the pleasure to become acquainted. The marked attention and civility which we experienced from one and all were truly gratifying; and I may safely say that, during all my rambles, which have been somewhat excursive, I never met with a more friendly and hearty welcome than at Reikiavik.—

To my friend Mr. Krieger I felt myself more obliged than I can express for the very flattering reception I received on the renewal of our acquaintance after a lapse of a few years; and I have strong reasons for believing that he was equally gratified at the unexpected visit of one whom, in all probability, he had forgotten. As a proof of his desire that the recollection of it should not altogether escape my memory, he begged my acceptance of his Icelandic snuff-box, regretting that he had nothing about him that might be deemed more worthy of my acceptance; to me it will ever serve as a memorial of as worthy a man as I believe exists.



Icelandic Ivory Snuff-box.

These snuff-boxes are in common use among the gentry; they resemble somewhat the *mull* or *sneezing-horn* of the Scotch, but are made of ivory, mostly of the morse or seahorse teeth, and are neatly mounted in silver.

There is another person, to whose unwearied and unceasing kindness I can never repay the debt of gratitude I owe him—Mr. Knudtzon, the worthy cousin of our worthy companion Broder Knudtzon—a name indeed which I believe I may with safety say is a sufficient passport through all Europe.

We set sail on the morning of the 20th of August, and with a light breeze reached the Meal-Sack late in the evening. At night the wind freshened, and we were well clear of the land before morning, when we encountered some very heavy squalls from all points of the compass, accompanied with showers of hail. At mid-day the weather improved considerably, and we got a steady breeze on the beam, which carried us through the water at the rate of nine knots an hour. The night was clear, and we enjoyed a fine sight of the Aurora Borealis, which in this high northern latitude is seen to greater perfection than we southerns have an opportunityof seeing it, more especially in the smoky atmosphere of London. During the 22nd we were terribly rolled about in a very heavy sea, without a breath of wind—one of the most unpleasant situations imaginable to a landsman, or, I believe, to a seaman either.

The calm continued till midnight, when we were lucky enough to get a strong and steady wind on the beam, which enabled us to continue running upwards of ten knots day and night, under close-

reefed mainsail, double-reefed foresail and reefed stay-sail, and which continued till we got sight of Barra Head, on the morning of the 25th, just *five* days from our departure, thirty hours of which we were becalmed. To the credit of our mate, and the accuracy of his chronometer, the yacht was steered for this Head, and the land-fall was made within a few miles of what the chronometer gave. Passing Barra Head in the evening, we made the Island of Isla, and soon found ourselves more quiet under shelter of the land. In running so fast through the water, we shipped several seas, as may be imagined, and the salt water often poured copiously through the skylight, and down the companion into the cabin.

We ran past Isla, and having stood on till we thought we were clear of some rocks which lie off the southern coast, we rounded the island, and laid to during the night. The intermitting light on the Island of Orensa, situated at the south-west point of Isla, shone beautifully bright amidst the darkness which prevailed, and the light on the Mull of Cantyre was not less brilliant, both being visible at the same time.

On the following morning at day-break we again got under sail, and enjoyed a fine view of the Hebrides as we sailed through the channel to the entrance of Ardfarrick, called in the charts Ardpatrick. We could get no pilot to take us in, but the weather being remarkably fine, and the channel

completely sheltered at the back of a small island called Ghia, we sounded our way through, the bottom being distinctly visible, until we opened out and entered a fine expanse of water, as smooth as a mirror, and anchored immediately opposite to the house of Captain Colin Campbell, a connexion by marriage of Mr. Smith.

Thus ended my voyage in the "Flower of Yarrow," to which I shall ever look back with the greatest pleasure, and with a deep sense of gratitude to my friend Mr. Smith, through whose kindness I have been enabled to visit an island of deep interest, and one not easily accessible, where the grand agencies of Nature employed in creating, changing, and destroying the earth's surface, are carried on to a greater extent probably than in most other parts of the globe. I feel that to this steady friend I cannot hope even to pay the debt I owe for the marked attention I uniformly received at his hands, from the moment I put my foot on board his yacht to the hour of my leaving her.

We all went on shore to dinner at Captain Campbell's, and having passed a very agreeable evening, being anxious to get to London, I took leave of my fellow-travellers, and started on horseback to East Tarbut, a distance of eleven miles. Being a stranger to the road, quite alone, the night dark, and the country apparently very bleak, my ride was almost as dreary as I had found it on my journey to the Laplanders.

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